

NEBULA

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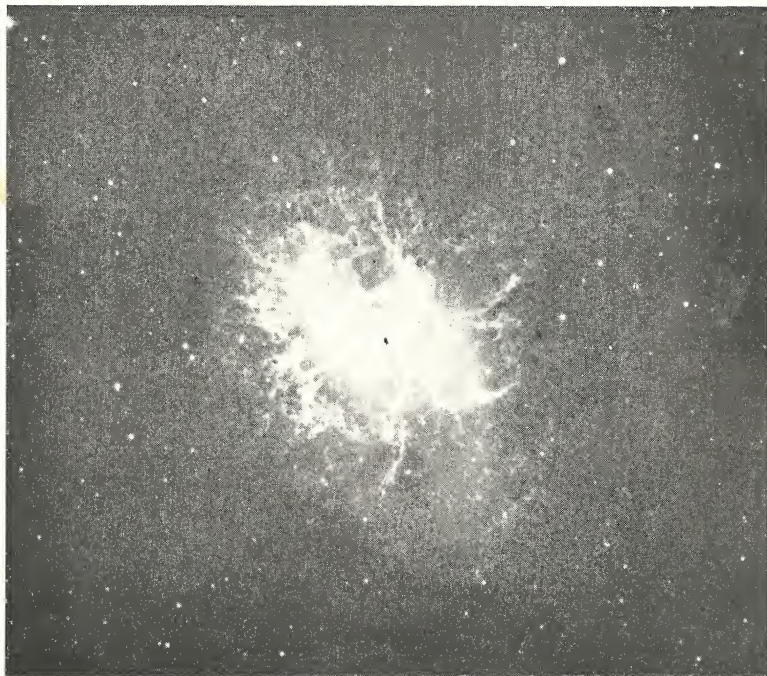
SCIENCE FICTION

NUMBER 35



FOR READING THAT'S DIFFERENT

NOVA AND SUPERNOVA



The Crab Nebula in Taurus (By Courtesy of Mt. Wilson and Mt. Palomar Observatories)

A. E. ROY, B.Sc., Ph.D., F.R.A.S., F.B.I.S.

A postman on his rounds just before dawn glances at the familiar stars and notices a bright star where yesterday there was none. And on receipt of the news, observatories all over the world spring into action to photograph the new star—the nova—to register its rapidly-changing spectrum for future study, and to dig through photographic records of that part of the sky to find out what occupied the region in which the nova now burns bright.

The name “nova” has stuck though it is a misnomer. The star now radiating with an intensity 25,000 times greater than that of the Sun has formerly been an obscure member of the Galaxy. Some years after its spectacular rise to brightness it will have sunk to its former faintness and will henceforth, almost certainly, remain that way.

The astronomers’ picture of this remarkable phenomenon and a reasonable explanation as to why it occurs, is the result of over a half century of painstaking observations of novae and a knowledge of atomic energy processes under pressures and temperatures that until a few years ago did not exist on Earth.

In fact, novae have been recorded for hundreds of years. In November,

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SCIENCE FICTION

Edited by **PETER HAMILTON**

Issue Number **Thirty-Five**

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by his presence he had saved them all from destruction*

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Look here . . .

During the past few months the one feature of NEBULA'S progress which has caused me more gratification than any other is the large increase in the volume of reader reaction (in the form of letters of comment, ballot forms, etc.) received following the publication of each issue. It is interesting to explore the reasons for this trend, particularly when one bears in mind the present far from encouraging state of the magazine publishing field as a whole.

The main and most obvious cause for this comparative success on our part is certainly the recent increase in our circulation in the U.S.A. I, personally, have always considered the letter sections of American magazines to be among the most intelligent and stimulating of their kind, and it is a real pleasure for me to be the recipient of many interesting letters from our American friends, all of whom seem pleased that NEBULA is now on sale over there, and anxious to give me their comments and reactions on the type of stories printed by a British magazine. A remarkable point about science fiction addicts on the western side of the Atlantic is the extreme alacrity with which they are prepared to subscribe to a magazine which many of them can only recently have discovered—the NEBULA subscription list now includes more than 45 per cent. U.S. readers, compared to only 40 per cent. in Great Britain, with Australia and New Zealand making up much of the remainder. These figures, coupled with our recent publication of a number of stories by American and other non-British authors, underlines the unique international policy and *appeal* of our magazine.

Another and much less obvious factor which has helped to increase the number of readers' letters we have received is an astonishing increase in female science fiction readers. Referring to our subscription list once more, I find that 4.5 per cent. of these regular readers are ladies, in startling contrast to a figure of only .5 per cent. exactly one year ago. While many male devotees feel that women are rather out of their element in so imaginative a literary form as science fiction, we all know that wherever the representatives of that most opposite of sexes turn up, they can be counted upon to express themselves very volubly.

Finally, of course, there is the long-term effect of our comparatively new monthly publishing schedule. This gives the reader a regular and frequent opportunity of buying the magazine, and consequently he has become much more ready to express his opinions on what he reads in it.

The important thing about all this is that the more people who take the trouble to write to us, the more accurately will we be able to assess what a representative cross section of our readers want to see in each month's NEBULA. We are here to please you, and if there is any particular type of story, feature or article you prefer, the logical thing to do is write in and tell us about it. I will do everything possible to grant all practical requests.

Peter Hamilton

The Captain's Dog

*He was only the slave of his human masters, but
by his presence he had saved them all from destruction*

Illustrations by John J. Greengrass

We buried Andy beneath a tree which wept beside a river. It was a gentle place of flower-dotted sward rolling from the winding stream towards thick woods lowering on the horizon. The banks of the river were thick with fern and delicate moss, the green spears of water plants and the nodding solemnity of rushes. It was a peaceful place though not a silent one. The waters sang as they coursed over shining pebbles; their song merging with the sighing rustle of the branches of the weeping tree, the sibilant whisper of the nodding rushes. Insects added their sleepy drone to the natural symphony while butterflies, as brilliant as gems, danced in the scented air as they beat time to the music. It was a restful, tranquil, contented place, the whole basking in an eternal summer from the light of a swollen yellow sun.

It was not on Earth. There were no unspoiled places on Earth

and on none of the parks would we have been permitted to desecrate the verdant turf. But it was not on Earth and here there were no property rights, no one to order us away, none to stop what we intended. So we ravaged the virgin soil and gouged out a hole six feet deep, six feet long and two feet wide. We spread the rich, black dirt around it and after we had placed our burden within, we filled it in again as best we might, patting it smooth and leaving a raw, ugly oblong sprawling its concave length beneath the branches of the tree. We filled it in and, awkwardly, waited for someone to say what we felt should be said.

"I——," said Hammond, and paused, sweat gleaming on his big face, the big, broad face with the deep-graven lines and the grim set of jaw, the face with the thin, tight mouth and the hard, uncompromising eyes. Hammond was a good captain as captains went. He could handle his crew and he could handle his ship and, according to his lights, was a fair and just man. Never before had I seen him at a disadvantage but now he seemed to have trouble finding words.

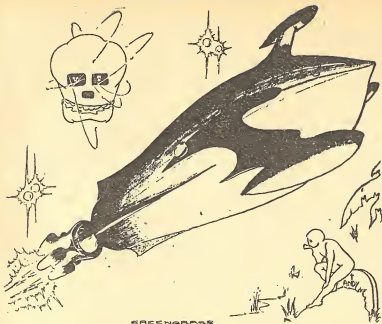
"I," he said again, and this time managed to continue. "I guess that we all know what we owe to Andy and I like to think that he knows how we feel." He dabbed at his forehead with a handkerchief, running it over his neck and beneath his damp collar. "I like to think that he will be taken care of wherever he may be at this moment. I hope so."

It was simple but it was sincere. Hammond didn't need words to say what he felt, his actions had already shown that. Starships do not usually stop off at virgin planets in order to bury their dead. Crewmen who die are normally dumped into space during transit; gone quick and forgotten quicker. It had taken much fuel and more time for Hammond to make this gesture and I respected him for it. So I said nothing, despite the irony, but instead looked at Clovis the engineer.

He was embarrassed, a man who did not know how to display emotion but who hid his feelings behind his gross bulk and a façade of coarse language. He shifted uncomfortably from one foot to another, glanced briefly to where the shuttle rocket waited to lift us back into space, then kicked absently at the mound around which we stood.

"He was a great guy," he said abruptly. And stared at Styman. "A damn good guy!"

Styman didn't argue. Styman never argued; Styman always stated facts and, if you disagreed with him, he would stare at you



with a supercilious expression as if you were too ignorant to waste time trying to convert. He was our navigator, a thin intellectual with an acid mouth and furtive eyes. His world was a world of facts and figures and, away from that world, he was out of his depth. He compensated for this by a sneering belittlement of the things which normal men hold in regard. But he did not sneer now, if he had I think that I would have flung myself at his throat, instead he scowled and spoke the naked truth.

"We'll miss Andy," he said quickly. "We'll miss him a lot."

"You can say that again," I said thickly, and had to swallow before I could speak again. "I guess that he was the finest crewman I ever knew."

My eyes smarted, probably from the effects of the gum-scented air beneath the weeping tree, but I managed to stare at Bryant and, if the cynical, world-wise and world-weary doctor felt offended at a mere galley-captain giving him a silent order he didn't show it. He didn't look at me though. He just let his pouched eyes drift over the mound, the tree, the river and the flower-dotted sward. His veined nostrils dilated as he snuffed the clean, sweet air of the place and, when he spoke, his voice was surprisingly gentle.

"It's a nice place," he said. "A very nice place. Andy should be happy here."

And that was the biggest irony of all.

I do not think that Andy ever knew what happiness was. If he did then he never experienced it. Once or twice, perhaps, he may have snatched a brief contentment, but such interludes only served to throw into greater contrast the grim misery of his daily round. A man can be miserable and still have time to dream and, in dreaming, find some happiness, some anticipation, some hope for the future. Andy had no anticipation, no hope and, if he could dream, then his dreams were the worst kind of self-torment I know. A man, incarcerated for life in a dank and isolated cell, can dream of freedom and what he will do with it, but such dreams serve only to increase his misery. Andy had no hope of freedom, ever, and nothing he could do with it if he had it. Andy was not a man. Andy was a male neuter manufactured in a laboratory. Andy was an android.

You find them all over, the androids. They are of medium height, hairless, slim bodied and with dark, sad eyes. They never smile and rarely speak and one looks so much like another that they could be identical twins. They are, of course, all springing from the same seed, all developed in the same environment, all built in the same way. When they emerge from their plastic sacs they are as identical as peas in a pod. Later they gain a slight individuality according to their treatment, but always one will remind you of another.

They are the creatures who carry your baggage; who stand, patiently waiting, for hours at a time while their mistress or master goes shopping. They sweep the streets, clean the sewers, polish your shoes and wait table. They do all the unpleasant jobs, the ones no human wants to do, the ones which no human can economically perform. They have a number but no one remembers that. Some have fanciful names but most are known by the natural diminutive of their generic name. We had one aboard.

He came to us fresh from his sac and learned life in the prison of a starship. He never left the metal hull, not even when we touched down at a port of call, but remained on constant watch duty in the control room, releasing one of us for outside leave. He never felt the naked sun on his skin, smelt the sweet scent of growing things, watched a bird in flight or bathed in a stream. He never joined us in a tavern to drink and stare at women wriggling in

seductive dances to the impassioned frenzy of drums. But once, returning unexpectedly, I found him reading a volume of verse I had in my galley.

"You're reading!" The discovery shook me so that I forgot my original impulse which was to snatch the book from his hands and slap his face before kicking him from my sanctum as a punishment for interfering with my property.

"Yes, sir," he said. He called everyone "sir" from the captain down to the lowest stevedore. I noticed a thin film of sweat glistening on his face. "I'm sorry, sir."

He expected a beating, I knew that. He expected to be kicked and cursed like a dog which has messed on the mat or chewed the curtains. He had done wrong and he knew it and now he waited, dumbly, for whatever punishment I wished to give. Instead I took the book from his hands, glancing at what he had been reading.

"Do you like Oscar Wilde?" I commenced reading before he could answer.

*We were as men who through a fen
Of filthy darkness grope;
We did not dare to breathe a prayer,
Or to give our anguish scope;
Something was dead in each of us,
And what was dead was Hope.*

I looked up, feeling as strongly as before the impact of these grim lines. I looked up and stared directly into Andy's eyes. Sweat? Eyes do not sweat, not even the eyes of androids. But androids do not weep either; only humans do that.

"You shouldn't have come in here," I said. "You know that I don't allow anyone to mess about in my kitchen."

"I'm sorry, sir," he repeated. "But I was all alone and——" He paused, his eyes searching my face. "I didn't think that I was doing anything wrong, sir."

I remained silent, thinking, more shaken than I knew. It wasn't the fact that Andy could read which bothered me; he'd had his basic education before coming to us, it was what he had chosen to read which was important. It was as if a dog had suddenly commenced to talk. Its ability wouldn't make it human but, at the same time, it would no longer be wholly a dog.

"Make some coffee," I ordered sharply for the want of anything better to say. "Make it good and strong."

"Yes, sir." He leapt to obey and I sat down at the kitchen table, the book in my hands, the pages opening of their own accord to the *Ballad of Reading Gaol*. Books only do that when they have frequently been opened at a special place and, much as I liked Oscar Wilde, I hadn't read that particular piece all that much. Andy? I glanced at him, busy over the stove, then dropped my eyes to the page and read the passage I had quoted. I read it again and then again and then once more and, each time I read it, the suspicion in my mind flickered to a brighter significance.

"Your coffee, sir." Andy was suddenly at my side, a steaming cup in his hand. He startled me, I had been far gone in thought and, at his words, I jumped, hitting the cup and sending the scalding coffee over my arm. Pain dictated my instinctive response; I struck out, knocking the android to the floor then pointed towards the door.

"Get out!" I snapped. "Clumsy fool! Get out and stay out!"

The blow was nothing new to him, the words even less, he had collected plenty of both in the past. He cringed and scuttled from the kitchen and, watching him go, I felt sick inside. No man should be so servile. No man should ever have allowed himself to be struck or spoken to like that without making an attempt to fight back.

But then, of course, Andy wasn't a man.

The burn wasn't painful, certainly not painful enough to merit medical treatment, and certainly not serious enough to seek it three days after the event had taken place. But the minor injury was an excuse. I wanted to talk about Andy and I wanted to do it with someone who should know all about androids and what made them what they were.

Bryant snorted as he examined the superficial injury. "What's the matter, Sam? Getting soft?" He leaned back in his chair, his pouched eyes sleepy looking. "That arm's all right and you know it."

"It hurts, Doctor." Of all the crew I was the only one who addressed Bryant by his correct title. To the others he was "Doc"; to Andy he was "Sir".

"Then slap some butter on it." The sleepy-looking eyes never left my face. "Are you going to talk about it now or leave it until later?"

"Talk about what, Doctor?"

"The real reason you came to see me." He gestured contemptuously towards my arm. "I'm not a fool, Sam. A man like you doesn't worry about a scald like that; not when he's collected a dozen worse during the course of his trade." He tapped my arm. "How and when?"

"Just before we took-off. Andy tipped a cup of coffee over me."

"I see." Bryant looked thoughtful. "So that's how he collected that swollen jaw. I'd begun to think that Clovis was falling into bad habits again." He didn't enlarge on what he'd just said but I understood well enough. The engineer was a quick man with his fists and tongue and the android had served as a convenient whipping boy. Then, for no apparent reason, he'd left Andy alone. It seemed that Bryant had been the reason.

"You like him, don't you, Doctor?" I blurted. "Andy, I mean."

He shrugged, the pouched eyes cynical.

"I didn't mean to hit him like that." For some reason I felt that it was important that Bryant should know the truth of the matter. "It was just that the pain made me angry and I struck out without thinking."

"That's the trouble with the human race," he said. "They never stop to think." He sat, staring at something invisible on the wall, or perhaps staring down the misty corridors of memory. He sat like that for a long time, almost as if he had forgotten my presence, then he shuddered and pulled open a drawer in his desk. "To hell with them!"

From the drawer he produced a bottle and a glass. He filled it, drank, and then met my stare above the rim. For a moment he hesitated, then produced a second glass and filled it to the brim.

"To the monkey men," he toasted, lifting his replenished glass. "May they never stop to think for, if they do, then they will find it impossible to live with their thoughts." He drank and, though I did not wholly understand his meaning, I drank with him. The liquor had forged a bond between us, a temporary bond I had no doubt, but I took advantage of it while I could.

"I've been thinking," I said slowly. "About Andy and the rest of them."

"Don't think, Sam," said Bryant. "It can be dangerous."

"Perhaps." I stared into my empty glass, wondering just how to phrase what I wanted to say. Converse about androids to most

people and they will regard you as soft or queer. "Just how different are they, Doctor? From us, I mean?"

"They have no souls," he said. "They are not born of woman and so they have no souls."

"Is that all?" The answer didn't satisfy me. Bryant, I knew, was being cynical.

"What more do you want?" He reached for the bottle and helped himself, slopping a little of the spirit onto his desk. I suddenly realised that he was more than a little drunk. "Do you want an analogy? Take a normal baby, depilate him, castrate him, fix his navel with plastic surgery and, when he reaches maturity, you'll have an android. Does that satisfy you?"

"Is it true?"

"Medically speaking, yes." He wiped his mouth on the back of his hand. "Medically speaking there is no basic difference between an android and a human. I have already given you the spiritual difference."

"They have no souls." I shrugged, to me that was small difference. Few of the men I have met could have laid claim to a soul and fewer still wanted to. But I did not argue the point. Bryant was not an authority on spiritual matters but he could answer something which had been troubling me. "Why are they gelded?"

"Gelded?" He frowned, then looked at me strangely. "That's an odd word for a cook to use. Where did you pick it up?"

"From books." I didn't want to go into the matter. Bryant didn't seem to want to leave it alone.

"Of course, I'd forgotten, you read a lot, don't you."

"Why not? It helps to pass the time."

"So does card playing, conversation, the making of lace or the playing of chess." He glanced at me, an odd expression in his eyes. "But human company isn't good enough for you. You are lonely and so you read. You feel unwanted, insecure and so you escape into the fantasy world of books." He shook his head at me. "Reading can be a dangerous pursuit, Sam. Men have ideas and they write them down so that other men can absorb them. Some men even act upon them. Revolutions have been caused that way."

"I'm no rebel," I said shortly.

"No?" Bryant raised his eyebrows a trifle. "Then why the interest in the android?"

"Just curiosity." I hesitated, knowing that my answer wasn't

good enough, then decided to tell the truth. "I caught Andy reading one of my books. It—upset me a little."

"You see?" Bryant was more cynical than ever. "I told you reading was a dangerous pursuit." He shrugged. "If you weren't a bookworm then Andy couldn't have borrowed your property and you wouldn't have tried to break his jaw."

"I didn't hit him because of that. It was the pain from the spilled coffee."

Bryant didn't answer. He just sat at his desk, his pouched eyes staring at me as if I were a specimen beneath his microscope, his hand resting lightly on his bottle as if he were waiting for me to go so that he could help himself to another drink. But there was still something I wanted to know.

"Why are they gelded, the androids, I mean?"

"They aren't," he said promptly. "You've got hold of the wrong word. Gelding is what they do to horses. Castration is the medical term or, no, that is what is done to men." He frowned as if considering the problem. "Neutering is what is done to androids. Neutering. But it means the same thing in the end."

"But why Why do they do it?"

And then, suddenly, I had the answer. I knew why all androids were neuter; they just had to be that way. Jealousy was part of it; the jealousy of old men for young, handsome androids, the jealousy of those without virility towards those who are virile. But the main reason was superiority. A man, no matter how poverty-stricken or ugly, no matter how low his circumstances, could not but help feeling superior to an android. It was the inbred superiority of a man towards a eunuch; a superiority which had all the tremendous force of race survival behind it. And the same reason also accounted for the fact that the androids were depilated; hair is also a masculine symbol.

But why we had androids at all was something I still had to learn.

It is an odd thing that it is possible to see something almost every day of your life and yet never really see it at all. Then, because of some accident, or because it is pointed out to you, your viewpoint changes just that little and you wonder how you could have been so blind for so long.

With me Andy was like that. I'd known him ever since he joined the ship and had used him more than most. A cook has a lot of work to do and he's usually working long after the others have

finished. It was natural for me to pass a lot of that work on to the android; all the unpleasant work attendant upon the preparation and clearing away of meals. And yet not once in all that time did I ever think of him as other than a machine.

The thought that he could ever get tired had never occurred to me. I had ordered him to clean up and wash the kitchen, had left him plenty of work to do while I slept and then, when I had woken, kept him hard at it until some other member of the crew had demanded his services. And if he had faltered or had been slow I had cursed him, even struck him and never felt the slightest regret for having done so. Why should I? Can a machine feel fatigue or pain? But can a machine read poetry?

Andy had done that. But what really served to change my viewpoint wasn't so much the fact that he had been reading poetry but the nagging suspicion that he had not only read it but understood it. It could not have been accident that he had chosen that particular poem; the way the book had opened in my hands proved that he had read that verse often, how often I could only guess. But from that moment I ceased to regard him as a machine and began to think of him as an individual. And after I had spoken to Bryant I even began to think of him as a man.

Injustice does not normally trouble me; there is too much injustice in the universe, so much that it is accepted as a normal part of the scheme of things. Brutality has lost its power to tighten my stomach and send anger through my veins, I have seen much brutality and, by usage, have managed to isolate myself from it. The universe is as it is and the universe is too big a place for any one man to alter. And there are always books and books can be gentle things.

So, despite my changed viewpoint, I did not attempt to champion Andy or to protect him from his environment. True, I did ease off on his kitchen duties and forced myself to remember that perhaps he needed sleep as much as I, but aside from that I was content to study him as if he were a problem rather than a thing of hurtable flesh and blood. And, one shift, I discovered the reason why androids existed at all.

It was a little thing which did it, but how many discoveries have been caused through trifles? We had just eaten and Andy, as soft-footed as ever, had cleared the table so that we could sit in comfort, smoking and talking, relaxing as men must if they are to gain benefit from their food. Hammond wasn't with us, he always ate alone in the control room, but Clovis was there and Styman and

Bryant, each sitting at his own side of the table with myself filling in the square.

The talk had drifted, I forget about what, but suddenly something caught my attention.

"Captain's Dog?" I looked at Clovis. "Why did you call him that?"

"Freeman?" Clovis shrugged. "Well, that's what he was. A Captain's Dog." He chuckled. "Or he was until he jumped ship one touchdown and headed for the hills. I guess he figured that any sort of a life was better than the one he had." He chuckled louder at my expression. "Don't you know what a Captain's Dog is?"

"No." I was curt, I had the feeling that Clovis was being funny at my expense. He laughed even louder as he read what I was thinking and jerked a thumb towards Styman.

"He'll tell you," he wheezed. "Tell him, Styman, about old Captain Delmayer and his dog."

Styman frowned, annoyed at being brought into the conversation but he did as Clovis had asked.

"Captain Delmayer was one of the old timers," he said. "I never met him myself, he was around long before my time, but he had a terrible temper, so bad that he'd had more than one incipient mutiny on his hands. You see, he used to flare up and when he did he'd hit out at the first man around."

"And he was a big man," chuckled Clovis, taking over. "His crew half-loved, half-hated his guts, but he could be generous and he was a fine captain in other ways so they decided to do something about his temper. Anyway, to cut it short, they clubbed together and bought him a plastic dog. It was a big thing, so life like that you'd swear it was real, and they put it in the control room."

"Why?" I was interested.

"Some head doctor told them to do it, so they did. And it worked fine! Whenever Delmayer blew his top he'd take a running kick at the dog and send it from one side of the room to the other. That eased his temper and kept the crew happy." Clovis chuckled again. "It had to be a plastic dog, of course, old Delmayer was too fond of animals to hurt a real one—even if he could have found one able to stand more than one kick." He stared at my face. "Something wrong?"

"No," I lied. "Why did you call that man, Freeman I think you called him, a Captain's Dog?"

"Why?" Clovis shrugged. "The name just stuck, I guess. Anyone who didn't have the guts to stand up for himself used to be

known as a Captain's Dog." He shrugged again. "As far as I know they still are."

He was wrong. Now they had a new name. And now I knew what that name was.

Once, while on a brief touchdown at one of the more civilised planets, an elderly woman stood at the exit of the landing field and passed out little slips of paper to all who passed. I don't suppose that more than one in a dozen even glanced at the slips and of that number only a tenth bothered to read what was written on them. In fact they were invitations to attend a meeting of the Purist League, a body of idealists who wanted to abolish the manufacture of androids. I had nothing better to do and so I went to the meeting.

The Purists claimed, and proved by graphs and figures, that there was no need for androids at all. Humans could breed as fast as desired and at a lower overall cost per unit than any android ever made. With mechanisation the way it is, labour was no problem and so, demanded the Purists, why contaminate the human race with these artificial constructions of the scientists? Leaving aside the fact that androids can't contaminate the human race any more than robots can, they had a good argument. It sounded logical and it even made sense. But they had forgotten the basic need of Mankind.

Bryant dropped into the galley one shift a little while after I had learned about the Captain's Dog. He sat down and toyed with the cup of coffee I gave him, staring about the kitchen and the row of books I keep above the stove. He nodded towards them.

"Still reading?"

"Of course." Here, in my own domain, I felt more at ease than I had when first I had questioned him about Andy.

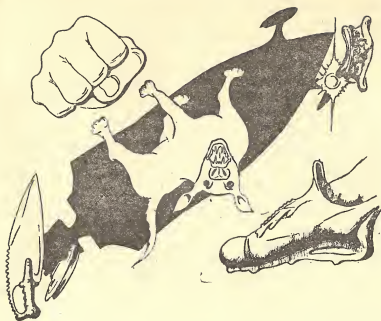
"Andy? Is he reading too?"

"Yes." I felt myself becoming embarrassed and was angry at myself for it. "I let him borrow a book from time to time. Why not? Where's the harm?"

"In reading? No harm at all. It's in what he might read that the danger lies." Bryant, to my surprise, was very serious. "Such things as *The Declaration of Independence*. You know it? Or *Genesis*, or some of the philosophers. I warned you of the dangerous ideas men can obtain from books, remember?"

"Is Andy a man?" If I had hoped to shock him into a damaging admission I was to be disappointed.

"You know what Andy is," he said levelly. "I was watching your face when Clovis told you." He leaned forward, his veined



nose and pouched eyes giving him a peculiar, almost inhuman expression. "Well?"

"I know," I admitted, and suddenly felt my stomach tightening as it had once before when I'd seen a wrongdoer being whipped to death for some minor crime. "But why? why?"

"Androids are necessary," said Bryant heavily. "Androids, in one form or another, have always been necessary." He halted my protest with a gesture of his hand. "I know what you are going to say, that we've never had androids before, but stop and think about it for a moment. What makes an android a thing apart? Isn't it the fact that he isn't really human? And what would you call a man of another race? Another colour? If you had clear ideas of what constituted a human, and you were human, then anything different from yourself couldn't be human, could it? And the same applies to beliefs, to religions and ideals. If others are different, then it doesn't really matter what you do to them. Because they aren't really human and the rules governing human conduct do not apply. And that isn't all."

I didn't need him to tell me the rest. I didn't need him to point out that every civilisation has its roots in a slave culture of

one form or another and that so strong a heritage cannot be denied. And I knew that men were sadistic and that they couldn't help being that way even when paying lip-service to an ideal. Logic can prove that all men are created equal but no logic in the universe can ever convince a man that every other man is as good as he is. And it is right that this should be so for men are not equal, no matter how they may have been born. Emotion and instinct can, quite often, be more correct than cold logic.

"We need a Captain's Dog," said Bryant. "All of us. Something or someone to hit when we are hurt, to beat when we are beaten, to master when we have been mastered. We have to prove, to ourselves at least, that we are better than someone else, or something else."

"In this day and age?" I didn't elaborate the point but my eyes drifted over the metal of the ship in which we sat.

"In any day and age," said Bryant. "Men haven't progressed, Sam, not as we sometimes like to think we have. We have technological toys and we have managed to develop a conscience, but that's about all. Deep down inside we are still the primitive and, if we can still the pangs of conscience, we can be as hard and as cruel as any insane animal."

He was right of course. I knew, who better? that civilisation has progressed beneath a system which has accustomed people to being kicked by those above. Civilisation had been a ladder which could only be climbed by a ruthless disregard for anything and anyone but self and, again, it was right that this should be so for, without such competition, Man could never have progressed beyond the cave. And Man is what he is; alter his way of life, his mental, instinctive outlook on life and he will no longer be Man.

So we have our system and our system works and, if such a system makes life a living hell for those on the bottom rung of the ladder, then that is the price we must pay. But we have a conscience too, and a growing awareness of the humanity of Man, and slavery is no longer to be tolerated. So we compromised. Add another rung to the ladder and so lift all humans to a point where any and everyone has something to kick.

Give all humanity an artificial Captain's Dog.

Things were not the same after my talk with Bryant. Not the same, that is, for me, though the others continued just as before, using Andy as a convenient mechanism, using him to vent their spite and their frustration at each other. A starship is a boring place with little to do for long periods and tiny feuds boiled between the

crew. Styman had his knuckles rapped by Hammond, he was a hundredth of a degree off course, and kicked Andy viciously on his way to the dining-room, kicking Hammond in proxy and so easing his soul. He looked startled as I grabbed his arm.

"Did you have to do that?"

"Do what?" He was genuinely baffled. "What the hell are you talking about?"

"Did you have to kick Andy like that?"

"That's my business." He looked down at my hand where it gripped his arm. "Get your hand off my arm, Sam. I don't like to be handled."

I hesitated, trying to control the anger which had tightened my stomach, knowing that I had no real justification for such anger. How I felt towards Andy was my business. It was something personal and I could not expect others to feel the same way. I released Styman's arm and stepped towards the kitchen.

"Just learn to control yourself a little," I warned. I could not help but make the warning. "Andy's no dog to be kicked around." I entered the kitchen and had crossed to the stove when I became aware that Styman had followed me.

"Just what did you mean by that, Sam?" His thin mouth was pinched together, a slit in the weak contours of his face.

"What I said." His eyes warned me, I had seen such eyes before, and I knew that Styman was boiling with rage. He had been in a temper when he'd left Hammond; he had tried to vent it by kicking Andy and I had interfered. Now his rage had transferred itself to me.

"Andy's a thing," he said deliberately. "A collection of chemicals brewed together in a vat. He isn't human and you know it. Why the sudden interest?"

"That's my business." I took a deep breath. "Just leave him alone."

"Why?"

"Never mind why. You just do as I say."

My control was slipping and I knew it. Championing the weak is, I know, a waste of time. The strong despise you for it and the weak are rarely grateful but, waste of time or not, this was something which I had to do. It had become a personal issue between me and Styman and, deep inside me, I knew the reason why. For a long time now I had thought of Andy as a man, not as a thing, and inevitably, I had ceased to illtreat him. I liked Andy; I did not like

Styman, and the android had become merely an excuse to vent my own dislike.

And Styman did not like me.

"You should see Bryant," he said coldly. "I believe that there is a word for those afflicted in a certain, peculiar way."

"I don't want any broken-down calculator to tell me what to do," I said, and from the way his thin mouth tightened I knew that I was scratching at his vulnerable point. "Go back to your books, little man, and leave real things to those who can understand them."

"I can understand one thing well enough," he said coldly. He glanced around the kitchen, his nostrils flaring as if he smelt a bad odour. "I can understand dirt. This place stinks of androids."

We all have our weaknesses and it was his turn to score. We were being childish, of course, in what we were saying to each other, but since when have men in anger been anything else?

"If you have any complaints," I said, "take them to Hammond. In the meantime get out of my kitchen and stay out."

"I'll go in my own good time." Styman glanced around again, wanting to hurt me but not knowing quite how to do it. He sneered as he saw my books. "You and that thing make quite a cosy pair, don't you? Locked up in here at all hours reading that trash and staring into each other's eyes." He sneered again. "No wonder you don't want to see your darling get hurt."

I am fat and bald and not so young as I was, and violence is something I do not like. But there are some things I will not stand, not even from the Captain himself, and Styman had gone too far. He knew it. I saw his eyes dilate and his face go slack with fear as I stepped towards him and he cringed, his hands thrusting at me, palms first like the hands of a woman.

"No!" he whispered. "Please God, no!"

"Are you crazy?" It was Bryant, thrusting himself between us like a wall of flesh, his hand gripping my right wrist. "Drop it, you fool! Drop it!"

I halted, staring down, my breath sobbing in my throat and, for the first time, realised that I had snatched up the big knife I use for kitchen work. Had Bryant not interfered I would have plunged it into Styman's stomach and not even been aware of what I was doing.

"He would have killed me," whimpered the navigator. "I could see it in his eyes. He would have killed me."

And then something happened which made all that had gone before of no importance whatsoever.

Starships are big things; they have to be in order that their pay-load capacity can justify the expense of operation but, big as they are, they have their Achilles Heel. Every part of a starship can be maintained and repaired by its crew except one and that one part depends on remote control and automatic manipulation. An atomic pile is something no one has yet learned to live with; not unless there is thick shielding between it and its operator, and rarely, fortunately rarely, does something go wrong. But when it does, then death is immediate.

The sound of the alarm siren killed our futile quarrel as though it had never been. Clovis, his face white and taut, came running towards us, Hammond close behind. They didn't need to say anything; the siren was plain enough, but Clovis explained anyway.

"The automatics have gone out of kilter," he wheezed. "The dampening rods are out and the Rontgen count is rising."

"How fast?" Bryant was concerned about the medical aspects.

"Too fast. We've maybe ten minutes, maybe less." Clovis wiped sweat from his forehead, forgetting even to curse in the emergency.

"What went wrong?" Styman was more practical. Hammond answered him as he joined us.

"From what I can discover one of the brace-rods has snapped, probably because of metal fatigue. In falling it threw out the dampers and jammed them open against the remote controls." He passed a hand over his face, closing his eyes for a moment as if the light hurt them. "A broken rod," he said. "A simple thing like that."

"We can fix it," said Clovis. "But someone will have to go in there to do it." And then he fell silent while we each watched the others.

I do not know how many books I have read, thousands probably, and I am fully aware of the way men are supposed to act when faced with a situation such as ours. In books the hero always volunteers to save the lives of the rest. In books—but not in real life.

In real life existence is too sweet, the mere act of breathing too important for heroics. Old as I am, useless though I may be, yet life is still sweet. There are books still to read, poetry still to relish, a thousand light years still to traverse and, if life is important to me it is no less important to others. And so we stood there, watching each other, while time seemed to have slowed so that each heart-beat became a separate, discernible function of our bodies.

"We could draw straws," suggested Clovis. "Short man goes in."

"No," said Hammond. "We can't do that." He passed his hand over his face again, and again closed his eyes and this time I knew why he made the gesture. For there could be no argument as to who had to venture close to the pile and die so that others might live. Failing a volunteer, the safety of the ship was the Captain's responsibility. Hammond was going to die, and soon, and he knew it. And his gesture was his way of saying goodbye to the present. And though we grieved for him, none of us was willing to take his place. None of us, that is, with one exception.

"I will go," said Andy, and it showed his state of mind that not only did he volunteer to speak unbidden, but omitted any form of title. "Tell me what to do and I will do it."

He stood beside me and a little behind; until he spoke none of us had suspected his presence. He had joined us as soft-footed as ever and now he stood, not smiling, not frowning, as emotionless as usual, waiting for our reply to his amazing offer. I do not know what he expected our reaction to be, I could not even guess, but one thing is certain, he did not expect no reaction at all.

"I won't wear a suit," said Hammond, ignoring the android. "The protection isn't enough and it will slow me down. I'll dive in, shift the broken rod and get out again as fast as I can. Bryant, you'll stand by to do what you can. Styman, you'll be in command until a new Captain can be appointed." He hesitated. "We have a little time before the danger peak is reached. There are one or two matters I wish to attend to before——" He took a deep breath, not finishing the sentence. "I will be back in good time." He turned and walked back towards the control room, walking proudly as became a man.

"I don't understand, sir." Andy plucked at my arm. "I said that I would go; why doesn't he let me?"

I stared at him as he stood beside me, so insignificant that, in a moment of crisis, no one had been aware of his presence, and I knew that I could never make him understand. How can you tell a dog a dog's duties? How can you explain to something which has always been on the bottom rung that those on the top have more than just the best things in the universe? They have authority and they have responsibility, but they also have pride. And when it comes to the point a man does not expect a dog to volunteer to do his master's duty.

"He will die in there, won't he, sir?" Andy nodded towards the engine room.

"Yes."

"He will cease to be," he murmured. "All this," and his eyes took in the entire vessel and his existence aboard it, "all this will cease to be. It will be ended, over, finished for ever. Does he want that?"

"No," I said. "But unless he does it we will all die." I forestalled his next question. "And he will never permit you to take his place. Never."

"To die," he murmured. "To sleep, no more——" And then he was gone, running away from me down the corridor towards the sealed door of the engine room, racing past Clovis and Bryant and the startled face of Styman, running with a patter of feet while the words of the unhappy Dane echoed in my ears.

I tried to catch him; would have done had not Bryant caught my arm and dragged me back. Even then I think I would have reached him in time had not the doctor slapped my face and called to the others to restrain me. They held me tight between them so that I could do nothing but watch and curse helplessly while Andy undogged the external door and ran inside to his death.

"The fool!" I fought to free my arms so that they had trouble in keeping on their feet. "He'll die in there! Die!"

"Is that bad?" Bryant rested his fingers on my throat. "Relax now, Sam or I'll squeeze your carotids and black you out."

"But——"

"But nothing." He nodded to the others and they eased their grasp on my arms. "You and your books! I warned you about letting Andy read but you wouldn't listen. Did you think that you were being kind? Did you think that by showing him all the things that he missed, that he could never enjoy, that you were doing him a favour?" The disgust in his voice startled me so that I forgot to struggle and stood limp, shocked by the sudden realisation of the truth that was being shown to me.

"Dying is the kindest thing that could happen to him," said Bryant heavily. "Why else do you think I held you back?" And he stepped away from me as the others released my arms.

And so we stood, waiting, Hammond too, when he finally joined us ready for death and finding instead a hope of life. We waited while a man-made thing passed through the shielding into the invisible flame of the atomic pile. Waited while our nerves crawled and our hearts slowed and time hung in an eternity of

emptiness. Waited until Andy finally emerged into sight again, falling into the corridor with the last of his strength, his eyes fixed on mine until the last. And then we had to wait some more while the radiation counters eased from the red, waiting until his body cooled so that we could enclose him in a plastic bag without fear of the invisible death he carried.

And, while we waited, who knew what thoughts passed through the others' minds? Regret at unkindness done and now irredeemable? Guilt at unthinking brutality? Sorrow at treatment, undeserved and yet received in full measure from the hands of those who boast that they are made in the image of their Creator?

Whatever we thought we tried to make up for all that had been done in the end. And so, we halted at a virgin planet and buried Andy beneath a tree which wept beside a river in a gentle place of flower-dotted sward and drifting butterflies. More than that we could not do, for the highest honour men can pay is to bury a stranger as one of their own. And it is a comfort to know that, at the last, we regarded Andy as a man.

Even though it was far too late by then to do him any good.

E. C. TUBB

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Bitter End

*Two had gone to Mars and only one returned—with
a story too horrible for human ears to hear*

Illustration by Gerard Quinn

The ship dropped out of the sky with no noise other than that of its braking blasts. It was not easy to see because from behind it came the glare of a brilliant sun. Describing a shallow angle, it neared the surface and let go a dozen bangs from its nose. Then its underbelly skids struck dirt, it slid forward in a cloud of dust and came to a stop.

An expert eye could have seen at a glance that this was no ordinary moon-rocket such as flamed between Earth and her satellite five times a week. It was longer, thinner, racier. Close inspection would have revealed it more worn, battered and neglected than any moon-rocket was permitted to be.

Originally it had been golden but now most of its plating was scraped away in fine, longitudinal lines. Tiny missiles of great hardness and immense velocity had scored the armour from end to end.

In seventeen places they had pierced it like needles going through the rind of a cheese. Seventeen tiny air-leaks had been plugged with a special gun firing bullets of semi-molten alloy.

The ship had the pitiful air of something whacked almost to death, like a maltreated horse. It lay worn and exhausted on the desert sand, its tubes cooling, its casing showing a few thin hairlines of gold as reminders of departed glory.

Vaguely discernible near the tail were coppery traces of the vessel's identification number: MI. It was a number once to be conjured with. A number to fill the world's television screens and thrill the minds of millions. Newspapers still nursed headlines in four-inch caps featuring that identification, holding them in readiness for the great day.

MI COMES BACK.

TRIUMPHANT RETURN OF MI.

MI LANDS TODAY.

They'd not had the opportunity to use them. MI was out of time and place. The proper time lay many months back; the proper place was Luna City spaceport whence it had departed. Not here, lying in the desert like a corpse escaped from its grave. Not here with none to witness save the lizards and Gila monsters, the scrubwood, cacti and tortured Joshua trees.

The man who came out of the airlock was no better preserved than his ship. Gaunt, with hollow cheeks and protruding cheekbones, skinny arms and legs, sunken eyes filled with the luminous shine of the feverish. Yet he was active enough. He could get around fine providing it was at his own pace. That pace had three speeds: leisurely, slow and dead-slow.

James Vail, thirty-three, test pilot first class. Thirty-three? He brushed thin fingers through long, tangled hair, knew that he felt like seventy and probably looked it. So much the better, so much the better. The sharp-eyed and inquisitive would pass him by, fooled by his apparent years. Despite their formidable resources the powers-that-be would find it hard to trace a man who had aged enough to resemble his own father.

He left the ship without a qualm, without regret, without so much as a backward glance. The abandonment meant nothing to him because so far as the vessel and its contents were concerned his conscience was clear. World scientists would find precisely what they wanted within that scarred cylinder. All arranged in readiness for them: the samples, records, photographs, meterings, the cogent data. He'd been meticulous about that. He had followed the line

of duty to the last, the very last. There was nothing missing—save the crew.

A road ran seven miles to the north. He had landed the ship strategically, as near as he dared but safely concealed behind a low ridge. Now he set forth to reach the road, scuffling the sand like a stumblebum, resting eight times on the way. One mile at a stretch was the most he could manage. Once upon a time he could have run the entire seven miles and then done a tap-dance. He'd been lots fitter and fresher then, with more weight, more muscle, more stamina.

Traffic was sparse and the wait for a lift likely to be prolonged. That, too, could be regarded as advantageous in that it reduced the chance of some passing motorist⁴ having noticed the ship swooping to ground in the south.

He sat on a boulder, hands deep in pockets, and bided his time. If he had learned one thing these last couple of years it was how to wait in fatalistic patience when nothing whatever could be done to hasten events. A gaudy coral snake squirmed from the shadow behind his boulder and glided into the desert to escape his presence. He stared with blank expectancy up the road and remained unaware of the snake's existence.

In due time a big green sedan showed up, ignored his thumb, roared past with a rush of wind and a scatter of hot grit. Without resentment he resumed his seat on the boulder. In the next couple of hours eight cars and a creaking feed-wagon went by, taking no notice of his begging gestures. Eventually a huge red truck picked him up.

"Where're you going?" asked the driver, putting it into gear and letting it lumber forward.

James Vail settled himself comfortably in the cab, said, "It doesn't matter much—any place where I can catch a train."

The driver glanced at his passenger's hands, noted protruding blue veins and swollen knuckles. Firming his lips, he gazed silently through the windscreen. After a while he spoke again.

"Down on your luck, chum?"

"Not really. I've been sick."

"You look it. You're little better than a skeleton."

Vail smiled wryly. "Some folk look worse than they are."

"Well, how did you come to be stranded out here in the wilds?"

That was an awkward one. He thought it over, knowing that his mind was working with unaccustomed slowness.

"Another fellow gave me a ride for as far as he was going.

He dropped me six or seven miles back. I've been walking from that point. Nobody else would stop for me. Probably they were afraid of finding themselves stuck with some whining, cadging wastrel."

"That can happen," agreed the driver. "I've a pretty effective way of coping with such characters."

He did not offer the details of his technique. Evidently he'd mentioned it only as a warning. He was a big, powerful man, red-faced and tough but amiable. He was the type who'd beat a threatening tramp unconscious—and then give his dinner to a hungry cat.

"A long-distance truck driver can pick up trouble any time of the day or night," the driver confided. "A hundred miles back I passed a painted, dressed-up dame looking for a lift. She waved like mad at me. Aha, I said to myself, and kept going. I've been on this run before, see, and——"

He continued his reminiscences for an hour while Vail lolled by his side and filled occasional pauses with monosyllabic assurances that he was listening. The truck trundled into a small town. Vail sat erect studying its shops. His tongue licked across pale, thin lips.

"This place will do. You can drop me here." The truck stopped and Vail got out. "Thanks for the ride."

"Think nothing of it." The driver waved a friendly hand, moved away.

Vail stood on the pavement and watched the crimson bulk roll from sight. Just as well not to stay with that truck too long, he thought. A trail is harder to follow when breaks are frequent and erratic. In due time his own trail would be picked up and every effort made to trace it through step by step to his ultimate hiding-place. Nothing was surer than that.

They would find the ship later today or perhaps tomorrow or even the day after. In these modern times air-traffic was heavy enough to ensure that some observant pilot would notice the grounded rocket-ship and report it. Police would go and take a look at it, recognise it, call in the scientists. They'd open it, search it from end to end, become excited by the presence of all they'd sought but alarmed by the absence of people.

From that moment the hunt would be on. Police spotter-planes and helicopters scouring the desert. Patrol-cars tearing along the roads. Telephone and radio calls widening the general area of alertness. Vehicles halted at road-blocks and the drivers questioned.

"Did you go past that point? At what time? Did you notice anything unusual? Did you see a couple of fellows hanging around?"

Sooner or later a patrol-car or police motor-cyclist would stop a big red truck.

"You did, eh? At about ten-thirty? You gave one man a lift? What was he like? Where did he say he was going? Where did you put him down?"

A phone-call back to this town. Then the local police out in full strength trying to pick up the new lead.

Yes, they'd be looking for him all right, puzzled over his importance with no criminal charge entered against him. But they would obey the orders of high authority, wanting him badly, moving fast and far, seeking him as assiduously as they'd hunt down a multiple murderer.

Well, they weren't going to find him.

He entered a cheap restaurant down a side-street. In here of all places he had to control himself, behaving casually enough to draw no undue attention. Finding a vacant table, he sat at it, consulted the menu with artificial boredom. It was a hell of an effort.

A blonde and blowsy waitress came, flicked invisible crumbs from the table, awaited his order. Her eyes softened as she studied him and found him a distinct change from the daily horde of fat and sweaty guzzlers. He was shy and skinny and the difference appealed to her maternal instincts.

"Ham and eggs," he said, unaware of her scrutiny.

She weighed him up again, asked, "Double eggs?"

Biting back the response he wanted to make he forced himself to say, "No, thanks. I'll have pie to follow."

It took a few minutes, long, slow, crawling minutes. He waited in patience, closing his eyes from time to time, compelling his mind to disregard sizzling sounds and appetising odours issuing from the kitchen.

The load she brought made him suspect that she had taken matters into her own hands. It included double eggs. Perhaps she had made an honest mistake, having other things on her mind. And perhaps she hadn't. The latter possibility alarmed him a little. If this was no mistake, it meant that she had got the measure of him and therefore would be certain to remember him a day, a week or even a month hence.

Expert trackers follow the trail by questioning numberless people who have reason to remember the seemingly ordinary.

He must eat and get out of here with the minimum of delay. Yet he could not show indecent haste. So he picked up his knife and fork, shuddered slightly as he felt them in his fingers. Then with tormenting slowness he got through the plateful, savouring every morsel and pretending not to notice the waitress watching him from the far end.

The moment he finished she was back at his table removing the plate and eyeing him inquiringly.

"No pie," he said. "You gave me too much. Really I couldn't eat any more. Just a coffee, please."

Momentary puzzlement showed in her features. Somewhere her calculations had gone wrong. It shows you can't judge folk by appearances, she decided. The longer one lives the more one learns.

Vail drank his coffee in easy sips, paid and went out. He did not turn to see whether her gaze was upon him as he departed. Behave normally at all times, insisted his mind. Behave normally.

With the same unhurried air he strolled along the street, crossed the main road, found another modest eating place half a mile from the first. He went inside, had two large hunks of pie and another coffee.

A-a-ah! that was better. The next call gained him a packet of cigarettes. He lit up and inhaled in the manner of one tasting the joys of paradise. Near the shop a long-distance bus pulled into a stop and an old lady with luggage struggled aboard. Vail put on a sudden sprint of which he'd have been quite incapable a short time before. Clambering in, he found a seat near the front. Steadily the bus droned out of town.

Trail-break number two.

At the end of three weeks he had settled himself seventeen hundred miles from rocket-ship MI. Sheer distance provided a margin of safety no matter how temporary. He had a room in a dilapidated but adequate boarding-house, a job in a factory. Trainee welder, they called him. From test pilot to trainee welder. He'd come down like a rocket.

Doubtless he could find employment far better than that, something more suited to his capabilities, if he looked around long enough. But the two hundred dollars with which he had landed had slowly and surely dribbled away. Anything would do to keep him going pending appearance of other and better opportunities.

His looks had changed considerably during these three weeks and he now bore reasonably close resemblance to the picture on his

pilot licence. Cheeks had filled out, arms and legs thickened, hair grown stronger and darker. His name also had changed. On the factory's filing system he was indexed as Harry Reber, forty-two, single and unattached.

Security of a job did not provide mental ease. He could not escape consciousness of the falsity of his position. Fellow workers emphasised it almost every hour of every day. They would bawl, "Harry!" and frequently he would fail to respond and they would notice the failure. With the swift appreciation of men who toil with their hands, they recognised him as one several cuts above his present station. They made mental note of the fact that none of his conversations ever revealed a worthwhile thing about himself. There was a mystery about him sometimes discussed in desultory manner when he wasn't around. Political left-wingers theorised that he was a stool-pigeon for the bosses. The lurid minded suspected a criminal record.

All of this could have been avoided and the square peg neatly fitted into a square hole by seeking a post with the moon-boats. Pilots always were wanted there, especially top-graders. The hunters knew that too. They'd be expecting just such a move, waiting for it, watching for it, and ready with a countermove of their own.

"James Vail, I am a government intelligent agent. It is my duty to——"

Hah! He would never give them the chance. Duty they'd call it to drag him where he did not want to go. What did *they* really know of duty? He had done his own duty according to his lights as best he could in terrible circumstances. Let that be enough and more than enough. Let him linger in peace and live in obscurity without being crucified for the sake of other and lesser duties.

Every morning and evening when going to or from work he bought the latest paper, scanned the headlines. Then at the first opportunity he'd go right through it page by page, column by column. He purchased one this evening, took it to his room and studied it from front to back.

Nothing about MR. Not a solitary word. Yet they must have found it by now. And they must want the crew. Nevertheless nothing had been said on the radio or the video and nothing had been issued to the Press.

Why this conspiracy of silence?

It occurred to him as a somewhat remote and rather ridiculous possibility that those equipped to deal with the data in the ship might question its authenticity, might find themselves unable to

define it as true or false. And then somebody with a strong imagination may have advanced the theory that the ship and its contents were all an elaborate hoax.

Though far-fetched, such a theory would explain the missing crew. They had not landed. They had never arrived. They had suffered some indescribable fate and something else had brought the ship home, something strictly non-human and now running loose. Or, alternatively, the crew had brought back the ship while possessed by parasitic masters now roaming the earth within their human hosts.

Fantastic and perhaps a little stupid. But if irresponsible journalists concocted such ideas for the sake of sensationalism, as well they might in dealing with the mystery of M1, they would scare the living daylights out of the general public. Official silence alone could prevent a wholesale stampede.

He shrugged fatalistically, fished out of his case a tattered newspaper that he'd found among some old wrappings a few days ago. Sitting on his bed he opened it for the umpteenth time and scanned the print. Whenever he did this he marvelled at how quickly bygone events fade from public memory. Today, at the present date, the main subject of interest was the final stage of the Scarpilo murder trial. Probably not one person of the large number in court could recall the names of those who had made the headlines in this newspaper now two years old.

M1 TAKES OFF.

Luna City. 9.0 GMT. The first ship to Mars roared into an airless sky and vanished precisely at deadline this morning. Pilot James Vail and Co-pilot Richard Kingston are on their way to the greatest triumph in human history. By the time this report reaches the streets the long arm of Mankind will be extended far, far into the cosmos.

And so it went on and on. Pages full of hallelujahs. Pictures of Vail, dark-haired and solemn. Pictures of Kingston, fair, curly, grinning like a cat that is about to swipe the cream. Pictures of the World President pressing the button that banged-off the boat by remote control. Articles by various scientists about the men, the ship, the equipment. Essays on how they'd cope with Martian conditions, what they hoped to discover.

A nine days wonder. It had remained no more until the time came when the ship was due back. Then the papers and public interest had perked up again.

M1 EXPECTED SOON.



MR ANY DAY NOW.

More pictures, more articles, more anticipatory huzzahs. It was, they declared, a coming thunderclap in human affairs.

Nothing happened.

The ominous note sounded two or three weeks later with the vessel that much overdue. Gloom built up through the next month and ended in grim acceptance of disaster. Mr was no more. Vail and Kingston had paid for Mars in the same way that twenty or more had paid with their lives for the Moon. *Requiescat in pace.*

And better luck next time.

Vail idly wondered whether the tardy return and official discovery of Mr had delayed or accelerated that same next time. Nothing he had read to date made any mention of any M2. The authorities had a habit of keeping such things secret until the last moment. However, it was most probable that up there high in the sky upon Luna another ship was taking shape and two or perhaps three men were preparing for the second assault upon the Red Planet.

There lay the major reason for a determined, persistent pursuit of himself. The powers-that-be would never be satisfied with the data he had left for them. They would want the answers to other

questions. They would want the story from his own lips, the whole story.

What had he left them? One, there was a complete technical record of the ship's flight performance outward and inward. Two, the story of the main driver tube's crack-up, how they'd repaired it and how long it had taken. Three, full details of faults or inadequacies in equipment, of which there had proved not a few.

Samples of Martian sand and bedrock, spa and quartz, plus flakes of queer, lignite-like substance that were anisotropic and therefore of possible use to radar. Several string-thin earthworms, fourteen feet long, coiled into pickle-jars. Also suspended in formalin were a few of those harmless wrigglers that might be either true snakes or legless lizards. Eight species of insects. Twenty-seven varieties of lichens. Thirty of tiny fungi. Nothing big because Mars harboured no life-forms of noteworthy size.

And he had left them general data in great quantity. Water dispersion maps showing supplies sparse except within two hundred miles of polar-cap rims. Gravitic, magnetic field, photon intensity and numerous other measurements. Temperature records running between 30°C and minus 80°C. Oxygen pressure meterings from .5 to .9 mm. Hg. Notes by the bookfull and graphs by the yard. It had been done as thoroughly as mortal men could do it.

But it wasn't enough.

A small part of the tale had been left out and they'd want that too—in his own words.

To hell with them!

In the mid-morning ten days later the shop foreman yelled, "Harry!"

It went in one ear and out the other.

The foreman crossed the floor, nudged him. "Are you deaf? I just called you. You're wanted at the front office immediately. They say it's urgent."

Vail cut off his flame with a faint pop, closed the valves on the gas cylinders, removed his helmet and dark glasses. He tramped along a chequerplate catwalk, down steel stairs to the outside. Perhaps they intended to transfer him to another part of the plant, he hazarded. But what could be urgent about that? More likely that they'd decided to fire him. Or perhaps somebody wanted to question him. He became wary at the thought of it. Reaching the corner he turned toward the office building which was constructed somewhat in the style of a glasshouse.

That was the hunters' first mistake: waiting in plain view. Their second was in being accompanied by a policeman in uniform. Vail saw the deputation in the foyer before they had seen him. Turning again and trying hard to look like a worker on some errand from one part of the plant to another, he moved swiftly into the narrow alley alongside the girder shop, reached the farther end, made his way to the time office beside the main gates.

There he found his card and clocked out. The watchman on duty ostentatiously consulted the time and looked him over with some suspicion.

"What's the matter with you?"

"I'm going home."

"Who said you could?"

"That's no business of yours. You tend to your own affairs and leave the bosses to cope with theirs."

So saying, Vail walked out leaving the other disgruntled but not inclined to take action. Going straight to his room he packed in great haste, paid his bill and called a taxi. Although he did not know it he escaped by little more than one minute. The taxi was hardly out of sight when two men arrived, checked the address, strolled inside and came out running. They snooped around the station half an hour after his train had departed.

Telephone wires hummed along four routes taken by locomotives during those thirty minutes. Distant bus stations were watched. Police cars and motor-cycles patrolled all exit roads from the town. Switchmen and brakemen searched assembled freight trains and marshalling yards for characters trying to ride on the rods or the roofs. Life became a misery for a few toughs, tramps and petty criminals.

For all this, they did not get him. Failure was their lot once again. Vail's wits had perked up along with the increasing health of his body. He had a mind designed for split-second decisions and equally quick translation into action. A test pilot's mind accustomed to facing sudden and grave problems and snatching the only way out.

Weeks ago, long weary weeks ago he had weighed up a major crisis, dealt with it and thereby created his present fix, there being no alternative in sight. Now he was dealing with the result in the only possible way: by keeping on the run until he was caught or forgotten. If they caught him he would surrender all the information that they wanted. But they must catch him first. On the other hand,

if he could avoid capture long enough they might forget him or dismiss him as of no consequence. That could happen if the hunt were overtaken by the march of events. For instance, his importance would shrink to well-nigh nothing if another ship made a successful landing upon Mars.

Eighty-five miles out of town the train slowed as it approached a crossing. A travelling circus was the cause. It had halted in a colourful, mile-long procession waiting for the train to pass. The engine-driver reduced speed to a crawl for the sake of a line of nervous, fidgety elephants at the head.

Everyone gaped through the nearest windows at the circus. By the time they looked back Vail had dropped out on the opposite side, case in hand. He got a lift on the tailboard of a lion cage, sharing it with an unshaven individual who could take out his teeth and force his bottom lip right up over his nose.

Forty miles farther on he had a new job. The circus arrived at its pitch and he was hired as a stake-driver, rope-puller and general factotum. He dragged heavy canvas until his finger-tips were raw, watched the Big Top rise billowing and huge. He helped set up the wire ropes, ladders and trapezes for the Flying Artellos, learned to address the Big Fat Lady as Daisy and the India Rubber Man as Herman. He learned to refer to lions as cats and to elephants as bulls, to grab a stake and yell, "Hey, Rubel!" when local hooligans mauled a barker or tried to wreck a side-show.

This was far different from the factory, especially in one important respect—nobody commented upon his secretiveness, nobody tried to pry into his past. They did not care a hoot if he was an impoverished embezzler come to the end of his loot or the King of Siam travelling incognito. The circus folk took him exactly as they found him and put their own valuation upon him without wishing to know more. This alone would have made him reasonably happy—if memories can be dismissed.

But they cannot, they cannot.

Though repressed, the depths of his mind remained with him. One night he had a vivid dream as restlessly he tossed upon a straw bed. He was racing at top speed through a long, dark tunnel, his feet gradually growing heavier and heavier. Other feet were pounding behind and drawing inexorably nearer. He made frantic but futile efforts to increase pace but failed. Voices called hoarsely in loud command.

He ignored the voices and sweated with the strain of trying to make his sluggish feet move impossibly fast. A reverberating blast

sounded from the rear and a stream of bullets flew over his left shoulder. The next lot, he knew, would catch him right in the back, breaking his spine and tearing his heart. His shoulder-blades cringed in anticipation as he tried to drag boots now weighing a ton apiece. The tunnel was endless and offered no other avenue of escape. The voices bawled again. This was it!

Violent jerking woke him up. Someone was shaking his shoulder. He opened his eyes, saw above him the emaciated features of Albert, the Human Skeleton. Because of what was secreted within his mind, this vision was even worse than the dream. The shock of it made him try to yell but no sound came out.

"Gosh," said Albert, "you gave me a turn carrying on that way."

Vail sat up and rubbed his eyes. "I had a bad nightmare."

"You must have. You were flat on your back and peddling an invisible bike just as fast as you could go. You aren't feeling sick, are you?"

"No, I'm all right. Don't worry about me. It was just a dream."

The Human Skeleton returned to his straw bag, lay down and folded hands across his skinny middle. It was a pose that held unconscious horror; he looked long overdue for his box.

Vail shivered, turned onto his side and closed his eyes. He could not sleep now. His brain seemed stimulated into abnormal activity and insisted upon pondering the situation.

In some manner he'd been traced to that factory, how he did not know. Possibly by sheer persistent legwork on the part of many. That meant they were definitely after him. The chase was more than a mere expectation of his own, it was a reality. And that in turn meant that despite official silence Mr had been found.

Therefore he would have to keep trailing the trail no matter how smooth and enticing any section of it might be. He must not succumb to the temptation to stay with the circus too long. Neither must he hang around the next place or the next. No rest for the wicked was a trite remark now being frighteningly illustrated.

When the hunt keeps on the move the fox cannot sit for ever in the covert.

He found employment for the last time a thousand miles eastward. He had crossed the continent and now could go no farther without taking to the seas. That was an idea not to be discarded;

sailors pass out of reach for long periods and can be most difficult to trace, especially when they desert their ships in foreign ports.

For the time being he was satisfied with a checker's post on the loading-bay of a plant making cardboard containers. It paid modestly, enabled him to have a cheap apartment in a slightly squalid house a mile away and, above all, it kept him concealed among the labouring hordes.

Eleven weeks had gone by since he'd gained a lift on that red truck but still the radio, video and newspapers had let out not a squeak. What discussions and arguments had taken place in official and scientific circles could be left to the imagination. The missing part of the story would have saved them a lot of breath, enabled them to see his problem and appreciate its sole solution. But he had denied them those details, leaving them with nothing but tantalising mystery.

Oh, the quandary he and Kingston had been compelled to contemplate. That broken driving-tube and the precious weeks it had consumed in putting right. The inevitability of planetary motions that can be slowed or halted for no man. The fatal time that must be spent awaiting the next moment of vantage.

They had filled in a good deal of that time by making further but useless tests, raking Mars for what it had to offer and finding the cupboard appallingly bare. In his mind's eye he could see Kingston now, retching violently beside an overturned cooker. Not one of the thirty fungi or the twenty-seven lichens was edible. Not one. They could be swallowed fresh, boiled, baked or fried, and they went straight down and came straight up, leaving a man feeling ten times worse than before.

The question they'd had to answer was a very simple one, namely, whether to get the ship back to Earth at *any* cost or whether to let it rot in the pink sands of Mars forever. Deep in their hearts both knew that there was only one response—*MI must return*. It could be done and they knew how it could be done but never on this side of heaven could they agree about how to apply the method. The solution was not one for calm, reasoned discussion. It was for prompt settlement in one way only.

Brooding over these things as he sat on the edge of his bed, he heard a knock, answered it without thinking. A moment later he knew that he had blundered. Two large men in plain clothes muscled their way through the open door.

The newcomers stood side by side estimating him with hard, shrewd eyes. Yet a mite of uncertainty lay below their normal

assurance. This was the first time within their experience that they had been ordered to bring in a man without knowing the reason and without legal justification for arrest. Presumably he should be requested to come along as a special favour—and be carried out bodily if he refused. Anyway, this definitely was one of the wanted pair. The other might not be far away.

"You are James Vail," harshed the older of the two. He voiced it as a statement rather than a question.

"Yes."

No use denying it. The hunt has ended all too soon. The law's nation-wide net had proved more efficient and far harder to evade than he'd thought possible. Eleven weeks, that was all he'd lasted, a mere eleven weeks. And in that time they'd picked him out from among two hundred millions.

Well, they had got him. Lies might serve to delay the issue but never to avert it. Truth must out sooner or later and perhaps he had been a fool in trying to conceal it. Get it over and done with. Get it off the mind on which it had weighed too long. Strangely enough he thought of that with a sense of vast relief.

"Where is Kingston?" demanded the other hopefully.

James Vail faced him, hands dangling. He felt as if his belly was sticking out a mile with the whole world staring at it. The answer came in a voice not recognisable as his own.

"I ate him."

ERIC FRANK RUSSELL

BACK NUMBERS . . .

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Dark Talisman

He was invulnerable to any attack the human mind could devise, but not, alas, to the vacuum of outer space

Illustration by Gerard Quinn

Nixon hung in space, turning slowly: The stars, a few planets, and the bright, close Sun made endless, monotonous circles around his space-suited body. Nixon was suffering—terribly. Now that the Sun was so near he was suffering the tortures of the damned.

"The gadget does not give immortality," the Doc had told him. But Nixon felt that already an eternity had passed since he'd been blown off the ship—an eternity of raw, screaming agony that was mercifully broken only by the regular, fleeting instants of black unconsciousness, and the even briefer periods that were pain free. It was during these periods, when his brain was in a condition to think objectively and his ears capable of performing their function, that he sometimes heard the Doc's voice in his 'phones. Sometimes he even understood what it said.

The Doc's spaceship was somewhere in the neighbourhood, hunting him. The Doc, who was also his brother, hated him very

much. He was trying to kill Nixon. He was trying hard, because the Doc didn't hate Nixon enough just to leave him alone.

People were right about one thing, Nixon thought: just before a person died, his whole life passed before his eyes. Nixon had been dying for so long that this particular phenomenon had begun to bore him. He had been dying—constantly—for a whole week.

It was like being forced to watch a film over and over again, except that this wasn't—entertainment. His life had been interesting, even exciting, in spots, but it didn't make a good film. There was always an unhappy ending. But after a long time had passed he solved the problem by adopting the tactics used by all cinema projectionists. Instead of watching the star—himself—he concentrated on the background characters, the bit players.

There was Helen, the Doc's Helen, a real nice bit player. Later on in the film he killed her. And there was the clerk at the Physics building. Meeting her had been the beginning of this present mess, though he hadn't known it at the time. He could see her again—blonde, beautiful, and briskly efficient, running a highly-polished fingernail down a list of appointments and saying: "Room 413, Mr. Nixon. You're expected." Her smile had been nice, but impersonal. Very impersonal.

Nixon turned quickly to hide the bitterness in his face, and headed for the elevator.

At eye level on the door of Room 413 a small brown plaque bore the name "Dr. Charles L. Nixon," followed by a couple of degrees. If the Doc had used all his degrees, Nixon thought sardonically, he'd have needed another door. But the Doc was a very modest individual who didn't believe in throwing his mental weight around. Nixon wasn't like his brother at all.

The chief difference was that Nixon had no weight—either physical or mental—to throw around. He was tall, thin, and awkward. His features were not unhandsome, but any attractiveness they possessed was spoiled by their constant and disquieting mobility. It was the outward symptoms of a strange mental disease, a peculiar and highly-personal disease which he'd named Overdoing. Nixon overdid things, constantly.

Whether he was selling brushes, books, or insurance, applying for a job, or just trying to date a girl, he put everything he had into it—and invariably messed things up. He put his customers' backs up immediately, left prospective employers with the impression that he was a loud-mouthed jelly-fish with a yen for licking boots, and he

writhed at the memory of what some of those girls had called him. Everything he tried failed; he'd been dogged by the most fantastic ill-luck since early youth, and now his chronic lack of self-confidence was showing itself physically in twitching features, shaking hands, and a personality that was anything but what he tried to make it.

Angrily, Nixon pushed the thoughts of despair and self-pity out of his mind. He'd been unlucky all his life, he thought as he pressed the bell-push, but his luck was bound to change soon. Maybe it would be to-day—a few seconds from now—when he would see his brother.

Nixon smiled, feeling almost light-hearted. The Doc and himself had one thing in common: they were both, after their own fashions, mathematicians. But where his brother used abstract symbolism to reach a solution, Nixon calculated probabilities from solid flesh and blood variables—such as the age and staying power of the nag, and the weight, ability, and will-to-win of the jockey. Naturally he failed in this also, as did thousands of others. But typically, his failure was immeasurably greater.

Nixon had overdone things. He owed some very hard men an awful lot of money. This time his failure could quite easily have been fatal if it hadn't been for that letter from his brother.

As footsteps approached the other side of the door, Nixon felt himself beginning to sweat. He'd never liked his brother, and hadn't seen him in five years. Should he act glad to see the Doc? Or casual, off-hand? So very much depended on this. When the door opened, indecision was fast bringing him to the verge of panic.

He said: "Hi, Charlie!" then felt like kicking himself. His brother hated being called 'Charlie'. Oh, he'd started well.

"Hello, Ben," the other said, apparently not noticing the slip. His brother was a slightly older duplicate of Nixon himself, but somehow managed to look tall, austere, and distinguished instead of skinny, foolish, and awkward as did his brother. The Doc held open the door and inclined his head. "We're all ready for you. Go straight through to the lab, please."

Nixon crossed a small anteroom whose ceiling seemed to be supported by packed rows of book-shelves, with an occasional filing cabinet here and there to strengthen the construction, and into the laboratory. The lab. had been rented and equipped, he knew, by one of the leading electrical firms with the idea of keeping his brother amused—and, of course, to help him work out some of his wild ideas. To keep the Doc further amused the firm sent him cheques,

regularly and at short intervals. It was one of the shrewdest investments the firm had ever made, because his brother was a very brilliant scientist.

The place was large, Nixon saw at once, but the amount of stuff packed into it made it look small. A fair amount of the gadgetry was grouped in uneven tiers around a cleared area of the floor, which contained in its centre a very ordinary leather armchair. His brother nodded towards it.

"That's for you," he said, then turned and called out, "Helen! If you're finished back there, we're ready to go."

Nixon stared as a dark-haired girl straightened from behind a bench and came towards them. She wore a grey lab coat over dark blue sweater, slacks, and tennis slippers, and the whole room seemed suddenly to light up. But that was silly, because high-wattage fluorescents were making the place three times brighter than day already. She was young, yet looked motherly, somehow—not the type, Nixon thought, to laugh or make him feel foolish. He felt himself grinning widely, and as his brother introduced them he knew he was talking and joking a lot, and trying desperately to be bright and engaging. He was very sorry, but not too surprised, when she suddenly stopped smiling and became interested only in some equipment nearby.

He'd been trying too hard again, behaving like an uninhibited adolescent ape instead of a fairly-civilised man. He'd scared her off.

"I'm anxious to start as soon as possible," his brother said. "You know what I want to do, and you wouldn't be here if you hadn't agreed to it, so if you don't mind. . . ."

Nixon held out his right hand and rubbed the thumb and index finger together gently. He smiled hesitantly, not using the tongue that got him into nothing but trouble.

"Oh, of course," his brother said impatiently, and took a thick envelope out of his breast pocket and gave it to Nixon. He sounded faintly contemptuous.

"Thanks," Nixon said. "B—but before we start there's something I want to know."

His brother grunted and opened a grey metal box that lay on the bench beside Nixon's chair. The box contained a set of surgical scalpels. Nixon winced and went on:

"About these tests. You said you wanted to try out a gadget that would necessitate cutting me up a trifle. Nothing drastic, of course, but just a few nicks off an ear-lobe or finger, and there would

be little or no pain attached. You hinted that there might be danger, but thought it slight as you'd already tested the gadget on yourself." Nixon wet his lips nervously. "Also, if I submitted to these tests you would give me a large sum of money, and you named the figure.

"Now," Nixon watched his brother's features carefully as he went on, trying to keep the fear and suspicion he suddenly felt from showing in his voice, "I know you don't like me, and on the face of it this looks as if you're giving me money—a whole lot of money—for practically nothing, so I want to know two things.

"What are the tests supposed to prove, *and why did you pick me?*"

His brother stared at him, an unreadable expression on his face. Nixon thought he caught a touch of pity in that look, but of course that was silly. After what seemed a long time the other said carefully, "You're mistaken, Ben. I don't dislike you exactly. I certainly don't approve of some of the things you've done. . . ." He gave a baffled shake of his head. "But let's skip that. To answer your questions, I picked you because the 'gadget' you refer to has got to be kept secret, and it has a better chance of staying a secret if we keep it in the family, which is the reason I wanted you for the tests. You see, I can't investigate the thing properly while I'm also the guinea-pig."

He ended simply: "The only way I could get you was to offer you money."

Nixon looked quickly at Helen, then back to the Doc.

"Helen is not a member of the family—yet," he said, answering Nixon's unspoken question, "and she hasn't been tested because there is still an element of risk involved. However," he went on impatiently, "I'll tell you everything I know about the 'Gadget' while I'm strapping it in position."

The whole thing had been a fluke, his brother explained, the sort of fluke that makes a billion-to-one probability look like a dead certainty by comparison. Dr. Nixon had been asked to try to develop a method of projecting true, three-dimensional images suitable for indoor viewing without distortion. The three-D effect could be obtained successfully in theatres and such places by various illusory means, but these methods weren't practicable for home use. The Doc had eventually solved the problem. Then, after handing over the solution for the addition of the necessary commercial refinements, he thought he'd have a little fun with the effect he'd discovered.

He made a cigarette lighter.

His ultra-respectable brother pulling a trick like that. Nixon could hardly believe his ears.

The Doc had made a large, ornate, pocket lighter. It would be great fun, he'd thought, to play tricks on his eminent friends by offering to light their cigarettes with the three-dimensional projected recording of a candle flame. He'd imagined their baffled expressions as they sucked and sucked and the tobacco didn't even smoulder. It would have been a very amusing sight.

Nixon thought that his brother had a very simple mind, but he kept the thought to himself. He could think of several ways the other could have used that effect. Profitably.

His brother ended, "It didn't work—at least not the way I expected." He gave a sigh. "Oh, I wish I'd taken detailed notes, instead of just throwing it together for amusement."

The lighter was now attached to Nixon's forehead by two soft leather straps, and the metal casing felt cold against his skin. His brother gave the fastenings a last hitch, straightened up, and nodded at Helen. She began moving around quickly, doing complicated things with the equipment surrounding Nixon's chair. The equipment hummed, whined, and made clicking noises. Some of it lit up, and there was a strong smell of ozone.

"Disregard that stuff," his brother said reassuringly. "You're safe where you are. It's just some detecting and analysing gear designed to tell us how—and I hope why—this gadget we're testing works." He took a scalpel from the box and made an inch long incision on the ball of Nixon's thumb, then said quickly: "Bend it a little so it bleeds onto that blotter, then watch it for three seconds." He dropped the scalpel and almost ran to one of his detectors, his eyes darting wildly about as he tried to read about twenty dials at the same time. He was sweating profusely. Nixon brought his attention back to the cut in his thumb. He watched it, closely.

Three seconds after the cut had been made, it disappeared. Completely. The few drops of blood that had fallen onto the blotter were gone, too. Nixon nearly slid out of his chair.

But he recovered from the shock quickly. There were a lot of questions he wanted to ask. He opened his mouth, then shut it again, because his own mind was giving him most of the answers already. They were wonderful answers.

This, Nixon thought with savage exultation, was at last his lucky day. That gadget: the more he thought of it the more wildly intoxicated he became. Joy was an emotion rare to Nixon, and hard to conceal. He fought to keep his face blank.

A short distance away Helen eyed his brother with some concern. The Doc was muttering and glaring at a battery of detectors, each one of which assured him that nothing whatever had taken place. After a time he calmed down, apologised to Helen for his language, and asked Nixon if he'd mind a few more tests. Nixon nodded assent.

During the hours that followed, Nixon was cut by the Doc more times than he could remember. But he was too excited to feel any pain. At one stage he had to make an incision himself in one corner of the lab, then dash to the opposite corner before the three seconds were up. But the results were the same—the cut healed instantly, and the blood he'd left thirty feet away disappeared. When it was all over, Nixon knew what the gadget could do, but neither he nor the others present had any idea how it did it. The Doc's instruments persisted in completely ignoring the gadget's existence.

Nixon hadn't said anything for a long time. He'd been thinking, hard, and slowly reaching a decision.

He asked quietly, "Immortality, Doc?"

His brother had been staring into the middle distance for the last ten minutes. He shook himself suddenly, and said, "Of course not."

Nixon let that go for the moment. "How's it powered, then? You haven't told me that yet."

"It isn't," his brother replied. "It doesn't use the batteries built into it, or any other source of power that I can detect." He looked gloomily at the equipment crowding the room. "I don't know how it works exactly, but if you want an informed wild guess. . . .?"

The Doc rubbed a hand across his eyes. Nixon could see that this business had cost him a lot of sleep recently. Then his brother sighed, and began using his lecture-room voice.

"The original purpose of the lighter was to project a small, three-dimensional moving image in full detail, which means that the image had to be set up and broken down again several times a second, in much the same way as a flat screen moving picture is produced. But, instead of projecting an insubstantial pattern of light rays, this gadget scans any living organism—we know it doesn't work on inanimate objects—that it is in contact with, and reproduces it perfectly if that organism is damaged in any way. And should the organism lose any parts, the missing pieces are *collected* somehow, and fitted back into place.

"You saw how the blood spots disappeared each time an incision healed.

"This is fundamental stuff—it doesn't operate in any of the known electro-magnetic spectra—which I've stumbled into by sheer chance. And from what I know of the laws of probability, it would take centuries of research before I could hit on it again—unless, of course, somebody discovered the principle on which this effect is based. My knowledge of physics—specifically the laws concerning the conservation of mass and energy—make me certain that the power used is drawn from a space-time continuum other than our own."

The Doc straightened from the bench and came towards Nixon. As he bent to unstrap the lighter from Nixon's forehead, his brother continued, "You remembered each test after it occurred, so obviously your brain cells aged in the normal way. Otherwise your memory would have ceased at the point of the first test. Therefore, if your brain cells aged, then the rest of you did likewise. That is why I'm certain about the gadget not giving immortality."

Nixon felt himself go cold all over as the Doc's fingers began loosening the fastenings. His voice shook as he said, "It's still a handy gadget to have around if there was an accident." To himself he thought: a *very* handy gadget. The decision he'd made didn't seem a bit wrong.

Like most people that Fate had a grudge against, Nixon was superstitious. In many vain attempts to break his life-long jinx he'd worn rabbit's feet, carried coal in his pockets, and did things which even he knew were silly; in short, he'd tried everything. But this was different. This was the ultimate in luck charms, for it gave complete protection against bodily injury, and even death—except, of course, through old age. With the Doc's gadget he could be another Achilles, but sans the latter's trick foot. Fate, Nixon realised, after giving him a lifetime of the most wretched ill luck, was at last making it up to him. He was *meant* to have this gadget, and he would have it. No matter what.

Carefully, Nixon said, "How about a few more tests?"

"No, no more." The Doc shook his head and went on gravely, "You can see why I wanted this kept secret. It's a terrible responsibility. By right I should get a lot of the top men working on it, trying to make duplicates, maybe, but I don't know. Suppose it fell into the wrong hands, someone with a yen for power, maybe. An indestructible dictator, or an unkillable criminal. . . ." He turned

his head away, but the worry still sounded strongly in his voice. "I—I don't know what to do with the thing."

Nixon looked hungrily at the enigmatic lighter now lying on the bench-top. If it were me, he thought silently, there would be no problem. There was no use in just asking his brother for it. In the Doc's mind he came under the listing of 'wrong hands.'

The Doc turned. "You've been a big help, Ben," he said politely. "Thanks a lot." It was dismissal.

Nixon rose to his feet, staggering slightly and bumping into the bench. Obviously sitting for so long in the chair had made him stiff. He muttered something about his clumsiness, his hands, meanwhile, moving very fast. When he turned and headed—not too quickly—for the door, a lighter still lay on the bench behind him. But it was Nixon's lighter and not the Doc's. Luckily, they'd been similar.

But the precaution had been unnecessary; the Doc hadn't even looked around. Probably still worrying, Nixon thought, laughing to himself, about the gadget falling into the wrong hands.

Nixon didn't think that he was the criminal or power-hungry type. He'd probably have to break a few laws if he was to provide himself with a life of comfort, but after that he just wanted to settle down and enjoy his indestructible life. And the beauty of it was that his brother couldn't tell the police or anyone else of the theft—not without telling the whole truth about the gadget. No matter what way Nixon looked at it, he was on top. He could hardly feel his feet touch to lab floor he felt so high.

A hand caught his elbow.

He'd forgotten Helen completely. But now he could see from her eyes that she'd seen him switch the lighters, and her mouth was opening to tell the Doc all about it, loudly. In sudden panic he gave her a rough, open-handed push out of the way and ran the last few yards to the door. He hoped he hadn't hurt her; it was the first time he'd laid violent hands on a woman.

As he reached it, the door and the whole room lit with a bright green flash. Nixon whirled, and felt suddenly sick. Helen lay, where he'd pushed her, among what had been some highly-charged apparatus. It had now discharged itself, through Helen. A greasy cloud of smoke, with the nauseating stench of burned hair drifted towards him. He couldn't move.

It wasn't until his cheek was ripped open from eye to jaw that he came out of his shock, to find his brother attacking him with hands, feet, and teeth. But this wasn't his brother. This was a beast,

a vicious, feral killer. Fighting desperately for his life, some cool, detached portion of his mind still had time to observe that the Doc must have loved Helen to turn him into an animal like this: He must have loved her very much.

But the Doc's fury, terrible though it was, was blind. It made him claw and tear when he should have punched. Nixon was more scientific, but he took an awful lot of punishment before he got the grip he wanted. Then his brother's head hit the lab floor with a surprisingly loud crack, and it was all over.

Outside, a woman screamed at the sight of Nixon's torn face and blood-covered clothes. She kept at it while he leaned weakly against the wall and fumbled for the Doc's gadget. When three seconds later he straightened, the blood gone and his face intact, the woman stopped screaming and fainted. Nixon hurried past her, trying hard not to think he was a double murderer.

But the Doc hadn't died from his skull fracture, and because of that near-miracle, Nixon was in his present mess.

The blazing splendour that was the eternal night of space wheeled slowly and majestically around him. But Nixon could only catch glimpses of it—his eyes were always first to go. With his ears it was different: heavy, tight-fitting 'phones kept them from bursting. He could hear fairly well, but only during the instants before the exploding agony of his body turned his brains to acid in his head. In the periods between blackout and the pain he could hear his brother's voice talking to somebody else aboard the ship. There were a lot of gaps, but he understood enough to know that they intended using a guided missile on him. After an eternity of pain—perhaps ten minutes—the talking ceased.

The exciting, badly-produced, and strictly down-beat movie that was his life began to unwind again. He couldn't do a thing about it.

Money being his first necessity, Nixon had decided to rob a bank. The attempt was both successful and a failure. He got the money all right, but he was twice seen by guards on the way out, and shot. It was very painful. The only reason he got away was because of the mental shock to the guards of a riddled body that wouldn't lie down dead for more than three seconds. Their expressions had been indescribable; one of them had burst into tears.

He could have saved himself some of the pain if he'd returned the guards' fire, but he kept telling himself always that he wasn't really a murderer. His next job was better planned, and painless.

Nixon had discovered that the gadget functioned perfectly no

matter what part of his body it made contact with, so he had it fitted to the inside of a wide leather and steel mesh belt, and wore it around his waist. He never took it off. It couldn't be taken off by anyone without cutting him in two, and if *he* wanted to remove it, it would take half an hour.

The gadget was fool-proof, of course. Even when a bullet lodged inside him, it was expelled as not being a normal part of his body.

He had all the wealth he needed to keep him happy for the rest of his life, but it had now become impossible for him to settle down anywhere to enjoy it. Since his brother had left hospital, a wide-spread, though undercover, hunt for Nixon had begun. Because of Helen the Doc hated him very much, so much that he'd broken his self-imposed oath of secrecy regarding the gadget. But his brother could do nothing alone, and neither could ordinary police assistance help much. So, being a very eminent scientist, the Doc had gone to the top, explained the position, and asked for help. He'd been given it.

Now, everywhere that Nixon went, no matter what disguise or method of concealment he used, hard-eyed, unobtrusive, implacable men—men with cyphers instead of names, and with practically unlimited authority—were close behind him.

They couldn't kill him by ordinary means, though they tried often enough. But there were traps, which could be laid if they were given enough time. Nixon had almost been caught once—by netting and a door-handle wired for five hundred volts—so now he wanted to keep moving around and not give them any time at all. Even then he knew that they would eventually get him. There was nowhere that was safe for him in the whole wide world.

The answer was, naturally, to get off it.

Taking a lot of trouble to cover his tracks, Nixon went to Mars. But space-travel is a very expensive business: he arrived at the martian colony practically broke.

The economic system—and the banks—were different there. The only thing both easily portable and extremely valuable were the Mars-processed artificial radio-actives, and anyone even trying to get near one of those precious nuggets would die of radiation poisoning in an hour. Nixon had the gadget, however, and a plan that was fool-proof.

Ben Nixon, he thought sardonically, space pirate!

They were an unsuspecting lot on Mars. He had no difficulty finding out about shipments and departure times, and very little



trouble obtaining passage on the ship he wanted—a recently commissioned job called the *Queen Titania*. He was good at disguise now, but intended staying in his hammock most of the time, just in case. His plan was simple. Just before the ship's two-G acceleration was shut off prior to the Turnover, he would don his spacesuit. Then, during the several minutes it took the ship to swap ends, he would go quickly to the shielded compartment containing the radio-actives. There would be no guards because nobody could live in the storage compartment for long—it was both open to space and flooded with lethal radiations.

The radio-actives compartment had an airlock, Nixon would open the inner seal, close it behind him, and wait inside the lock until the ship was close to the Moon. When the bomb—a fairly harmless gimmick that was all noise and smoke—which he'd have planted previously went off, he would enter the compartment. During the resultant confusion he would shoot the tiny ingot of radio-active material down to the Moon in one of the ship's message rockets, making sure that it landed near a conspicuous land-mark where it could be retrieved later. By keeping his glare visor down and pre-

tending to be a crew-man investigating a damage report, he would take the first opportunity to return to his cabin.

There were several men on the Moon, representatives of firms which were always chronically short of radio-actives, who would take the stuff with no questions asked.

It was a nice plan, but it didn't work out like that at all.

Nixon had noticed one of the new Government ships land just before the *Titania* took off. He didn't know that it took off seconds after he did, and with the same course and velocity. Neither did he know that the Doc and some of his high-powered help was aboard it—until the shutting down of both ships' A-Drive units at Turnover made radio contact between them possible. Then he heard his brother talking rapidly over the General Circuit, and he knew that everyone aboard was hearing the other's warning. His only chance was to get to the radio-actives compartment quick, before they started searching the ship. Nobody, he hoped, would think of looking for him there.

But there was a crew-man with a gun in the passage leading to the compartment. When the man saw Nixon, spacesuited and carrying the message rocket, he called "You! Stop!" and pointed his gun. Nixon was already pointing his. He fired, the reaction due to the absence of gravity sending him whirling backwards. When he'd steadied himself against the wall-net he saw the crew-man drifting down the corridor, doubled up, and with a lot of red on his blouse and shorts. His lack of feelings over what he had done frightened him suddenly. Was he becoming a killer?

Somebody was coming along the same corridor, and wearing a spacesuit by the sound of him. Nixon had no time to waste on a troublesome conscience.

He didn't want to start a battle—a misplaced bullet could easily wreck the ship, and that would be serious. Nixon had to hide; but he couldn't enter the radio-actives lock without the approaching crew-man seeing him. What to do?

Suddenly he had it. There was another small air-lock close by, which was used when a check on the exposed sections of the Drive became necessary. He made for it, breaking a smoke bulb behind him to hide his intentions. He could enter the compartment by walking along the outer hull. It was safe doing that, because the *Titania* wouldn't restart her Drive while a ship-load of government agents were preparing to board her. Once inside, the gadget would protect him from the radiation, and even if they did guess his hiding

place, he would have time to think his way out of the mess. He still believed in his lucky piece.

But Nixon hadn't known about the air-lock tell-tales. As soon as he'd worked the lock controls, that fact registered on instruments in the ship's control room. Nixon was just about to swing open the entry port to the radio-actives hold when the head and shoulders of a crew-man rose from the lock he'd just left.

The crew-man shot first.

The bullet went through his shoulder and out the other side, its kinetic energy knocking him off the ship. But the wound didn't matter; the gadget was still working. Then suddenly Nixon knew that it did matter, very much, because the gadget kept on working.

When a spacesuit develops a leak, the result is explosive decompression. When the leak is two large holes, the explosion is just that much more violent. To Nixon it felt like a lot of bombs going off inside him, all at once. His eyes went pop, his breath tore out of his mouth and nose so fast it felt like gravel, and pressure from his body liquids blew him out like a soggy balloon.

It was very, very painful. Nixon could never have believed that there could be so much pain at one time. But just as the agony was drowning itself in oblivion, the gadget would restore him good as new, and he went through it again.

And again.

The gadget didn't, of course, restore the ^aholes in his spacesuit.

The Doc was first to realise what had happened. Freakishly, the tight-fitting helmet 'phones kept Nixon's ears in working condition. He heard his brother's horrified voice shouting at him, and calling to the men in both ships to do something. But they couldn't think of anything to do.

After a very long time—to Nixon—there seemed to be a slight improvement if there could be an improvement in unbearable agony. The gadget had ceased to reproduce the air in his lungs, so he no longer exploded so violently. During the instants just after his restoration and before his eyes went, he saw the *Titania* begin to decelerate for the second half of her trip to the Moon, while he, with the ship's terrific pre-Turnover velocity, continued on. With his present course and speed he would miss the Moon. And Earth, too.

When the scream of the *Titania's* A-drive interference faded from his 'phones, his brother's voice came again. The Government ship was trying to pace him, and tracking him on radar.

There was disagreement on the ship. The Doc wanted to pick Nixon up, and risk what he and the gadget could do when they brought him into air again. The Government men said no; besides that risk, they hadn't enough fuel for the fancy manoeuvring that would be necessary. The ship's A-drive was incapable of delicate graduations of thrust, and being electronic in nature it couldn't operate in an atmosphere, so they needed all their precious chemical fuel to make a landing later. However, they were all horrified at what was happening to Nixon. They wanted to stop it, and let the gadget go hang.

Then his brother had thought of the guided missile.

The Doc told him when they fired it, and for the few minutes it took to reach him Nixon was so glad that the pain was almost bearable.

There was an explosion—just as painful, but different from the ones he was always having. It must have torn him apart. But the gadget was untouched. He came to—good as new—with a few scraps of clothing and spacesuit still clinging to him, and the gadget, held by that too efficient belt, still pressing against his back. It continued as before. Somehow his 'phones and receiver were still intact.

Nixon lived and died, lived and died, and kept on living and dying. He wished he could go mad, but the gadget kept reconstructing him, perfectly. And he was very tired of the psychological quirk that made him re-live his life every time it happened. For a time he forced his brain to calculate the number of times it had happened since he'd been blown off the ship. Then he tried to figure out how many more times it would happen. That number wasn't so big, but its implications were unthinkably horrible.

The Government men were arguing with his brother again. They wanted to go back. The ship was almost within the orbit of Mercury; it was getting too hot. Nixon felt the heat, too.

The metal of the Doc's gadget and the belt he wore had a very high melting point. Nixon knew that he was heading into the Sun, and that he would have to get very close indeed before the temperature was high enough to melt and destroy the gadget.

His brother was a very brilliant man. Nixon wished he'd think of something quickly.

The Undiscovered Country

*On distant Pluto, sluggish outrider of the Solar System,
the natives will surely have their own methods of defence*

It seemed to me I was taking part in some futuristic ballet, slow and symbolic, paradoxically based on a lightning incident of the legendary past: a Scottish border raid.

The chieftain's young daughter stood with her back to us, alone, unsuspecting, half a mile from her village. Phillips and I converged gradually on her from behind, silent as the near-opaque mist which surrounded us all.

We weren't moving in slow motion because we feared her detecting us: there was no chance of that. In fact, we were making all possible speed, but our alloy space-suits were heavy even under the lesser gravity of Pluto. The alloy had to be really thick, for the dense atmosphere encompassing us was more than half composed of an acid gas which ate away metal as fast as sulphuric acid dissolves zinc.

Moreover, we had to be thoroughly insulated against the intense cold of this sunless place.

It was one of those mad miracles of Nature that the girl needed no protection at all against either the cold or the corrosive atmosphere. Stark naked, she was at ease in her own element.

It was another miracle that, however different her internal structure, and with the certainty that her body cells were of a type beyond the knowledge, almost beyond the credence, of modern biochemistry, her shape was humanoid. And very feminine. Her skin was smooth and white. She might have been a marble Greek goddess.

We reached her together and lifted her gently, trying not to hurt her with our metallic fingers. She was hard and rigid and it was indeed as though we were carrying a marble statue back to the ship.

We followed the narrowing beam of the searchlight to its source on the hull of the *Icarus*, and waited at the door of Lock Two. There was a disturbance in the chemical-thick atmosphere around the ship. In the dim reflected light, it was streaming like inhaled smoke through an orifice in the hull: the pump's sucking mouth.

We examined our captive. This unknown Plutonian girl, whom we'd playfully styled "the chieftain's daughter, Pocahontas", had slightly changed her position. Her elbows, which had been pressed against her sides, were now a couple of inches from them.

Her hair was long and black, and she certainly had two human-seeming eyes, a nose and a mouth, but it was hard to discern details out of the direct shaft of light.

Then the pump ceased, its orifice closed like an iris lens, the atmosphere slowed in its swirling. The glass-lined storage tank was full to capacity with compressed Plutonian atmosphere.

In the ship, Captain Shervington pulled a lever, and the circular, safe-like door of Lock Two swung open. Like the rest of the hull, it was already deeply scarred with erosion. Whole patches were blistering and bubbling like paint under a blow-torch. We slid the stiff body through into the receptacle behind. It was like loading a frozen carcass into the refrigerator of a meat van.

The door closed on it and we made our entry through the other lock, into our own atmosphere. The air-lock door had scarce shut behind us when the *Icarus* began to take off, the Captain having left the pump and lock controls for the pilot's seat.

We had come some 3,600 million miles to Pluto to spend ten minutes there, get what we'd come for—and get out.

Two ships had been here before us. They had lingered too long. Neither returned.

The first reported the startling news that bleak Pluto was inhabited. It had landed on the outskirts of a community of some kind. The ship's searchlights, enfeebled by the dark mist, just

revealed the rough shapes of a group of smallish houses but nothing of their structure. They could have been the primitive huts of savages—or the ultra-modern dwellings of a highly-civilised race.

The natives, humanoid and naked, did not come running. They seemed either unperturbed or petrified. They stood around almost like statues. But not quite. The statues *were* moving, with infinitesimal speed, towards the ship.

So reported the captain after watching them for half an hour. It was his last report. His radio went dead. In the light of later knowledge it was presumed that the acid atmosphere had eaten through the antenna and probably also fatally holed the hull.

The second ship didn't wait around so long. It sampled the atmosphere, got a rough idea of its nature and what it was doing to the ship, and took off again in a hurry. The skipper's last interference-distorted words were: "Main jets erratic, ship difficult to control. That terrible atmosphere seems to have eaten chunks out of the vents. Side squirts pushing us off balance. I'm afraid——"

The rest was silence.

Plainly the skipper's fears were realised and the ship crashed.

We, the crew of the third ship, *Icarus*, were at least forewarned. We knew we'd have no time to stop and exchange pleasantries with the Plutonians, especially as it was apparent that the tempo of a Plutonian's life compared with a human's was like a snail's compared with a fruit-fly's.

The only way for humans to contact Plutonian life was to capture a specimen of it and take it home to study at leisure . . . if it could be kept alive long enough. And that was our mission.

We stewed in our suits as the *Icarus* fought to climb out of the Plutonian gravity pit, trying not to wonder too much about the condition of *our* vents. But they held out. We reached the required speed and began the long coast home. It was a relief to shed both weight and the suits.

Phillips, biologist, biochemist, and medico, was now the most responsible man of the trio, as he had always been the most accomplished. The bigwigs of the Institute of Planetary Biology, in the faraway Cromwell Road, wanted to examine a living, functioning Plutonian, not merely to dissect a corpse.

Captain Shervington, his own highest hurdle successfully jumped, could afford indulgence when he saw anxiety creasing Phillips' sweaty brow.

"Don't panic, Phillips, we'll all muck in and keep her in good shape . . . It is a woman?"

Phillips nodded so nearly imperceptibly that I felt confirmation necessary. I said: "It's a woman, all right, skipper, and she's certainly in good shape."

"So I thought," said Shervington. "I've got an eye for that sort of thing, even at forty paces on a dark Plutonian night. Let's have a closer peep."

He moved, but the conscience-taut Phillips anticipated him, hauling himself down the rungs, hand under hand, to the lower deck where the girl floated weightlessly in the clearplast container, Lock Two. Her outline was faintly blurred by the misty atmosphere which had entered with her.

Phillips glanced at her, then busied himself with the pumps regulating the flow of fresh atmosphere from the supply stored under pressure in the big tank. Considering her extremely slow rate of respiration, there should be more than a sufficient supply to keep her alive during the six weeks voyage home. The big problem was that nobody knew what Plutonians ate or drank—or even if they did.

The Captain and I looked Pocahontas over carefully. With her long hair afloat, her eyes staring wide, she looked like Ophelia drowning.

Now that we could see her features properly, there was nothing really unhuman about them. The pupils of her eyes were unusually large, as though dilated by digitalis, but that was necessary for light-gathering on darksome Pluto.

After long seconds, the skipper said quietly: "She's beautiful."

"I wonder if she has a sister?" I said.

Captain Shervington mused: "I wonder what's in her mind and whether we'll ever contact it."

There was no more time for wondering: we had our immediate jobs to do. I, navigator and signaller, had to report to Earth via the moon-base link and take our bearings. Shervington had to check the ship's space-worthiness after its acid bath. Phillips had to study his charge.

The cosmic interference was bad, and Earth sounded like an ancient Edison phonograph. But I managed to get the report over, and later the faint cracked voice of Shepherd, boss of the project, filtered through: "Well done, *Icarus*!"

I looked through a porthole at the dusky receding bulk of Pluto. At about this distance, on the approach, we had regarded it apprehensively, and the Captain had quoted wryly: "The undiscovered country from whose bourne no traveller returns."

But now we were returning and the fear which had accumulated

through long anticipation was fast dissolving. My spirit felt almost as airy as my body, and Shervington's report that the ship had escaped with negligible damage made relief complete.

Fame and a knighthood were the prospects now.

We returned to Pocahontas. Phillips was having a field-day with the various remotely controlled clinical gadgets with which the clearplast container had been fitted by long-sighted scientists. He'd successfully clamped the pulse meter on her wrist and its indicator was registering a full swing every half-minute.

"That appears to mean she's living about forty times slower than we are," said Phillips. "At least, organically. It doesn't necessarily mean her thought processes are correspondingly slower, although, of course, they must be slower than ours."

Men had long known that in sub-zero temperatures life processes were incredibly sluggish. How the Plutonians and ourselves were ever to get mentally in step was another problem, but obviously the initiative rested with us, the quicker-witted. If only a Plutonian could be kept alive under laboratory conditions on Earth, a way could surely be found.

Plutonian speech must be so slow as to be unintelligible to a human ear, each syllable perhaps minutes long. But if it were tape-recorded, and the playback speeded up to suit the comprehension of our lingual experts, and if their efforts at response were accordingly slowed down . . . there remained possibilities.

Phillips was currently fiddling with the blood-sampler. It was like an outsize hypodermic syringe swivelling freely on a bearing set in the clearplast. He was directing the needle-sharp point at Pocahontas' upper arm. An inch from where he was probing, on the white flesh, was a yellowish blob, like pus.

I indicated it. "What's that?"

Phillips replied irritably: "A pinprick—I missed the main vein. It doesn't follow because her pulse is in the normal place her whole artery system corresponds to ours. Damn it, give me a chance—I haven't even located her heart yet."

"Her blood is yellow?" asked the Captain, eyebrows raised.

"What colour did you expect it to be—blue?" snapped Phillips, still having trouble manipulating the sampler.

Tactfully, the skipper let it pass. In silence Phillips found his mark, and drew off a tubeful of amber fluid—apparently it turned bright yellow only after congealment. He set it aside, then hauled himself across to the atmospheric tank, carrying a flask with a screw top. Just where the pipe left the tank for the container, there was

a manually-controlled valve with an open outlet. Phillips screwed the flask into the outlet and turned the valve's handwheel.

The flask filled with the foggy atmosphere of Pluto. Phillips shut off the valve, stoppering the flask adroitly, and said: "These two samples will keep me busy for a bit. I'll see you later. Keep an eye on Pocahontas."

"Right," said Shervington. Phillips retired to his "stinks corner" up above. If he could successfully analyse the atmosphere, I would radio the formula to the Institute and they'd synthesize volumes of it in readiness for Pocahontas's arrival. He didn't expect to get far with the blood, working alone under no-gravity conditions, but he hoped at least to make a start in understanding Plutonian metabolism. A team could carry on from there, much faster, on Earth.

Six weeks without sustenance could kill a human. But that was the equivalent of only one day for a Plutonian. Perhaps in less than another Plutonian day, some satisfactory food could be prepared.

"Nevertheless," said Captain Shervington, after voicing this, "kidnapping a girl and starving her for two days is a bit rough. I hope we learn enough Plutonian to say we're sorry. Just her bad luck she happened to be out for a walk on her own when we landed."

"Good luck for us," I said. "The Institute wanted a female preferably, to get a fuller idea of the reproductive system."

"Maybe she just lays eggs, Graham."

"Maybe. You know, until I saw that yellow blood . . ." I trailed off.

The skipper looked at me quizzically. "You thought she wasn't so very different from us? You fancied, perhaps, some kind of Edgar Rice Burroughs romantic affair with her if she could be stepped up to our tempo?"

I grinned, and veered away. "I'd better test the radio link again."

He grinned after me. The link was all right: the usual mixture of words, crackles, and repeat requests. I came back later, and we spent some time just watching the figure in the container. Pocahontas gradually changed her position to a more reposeful one, though her hands were beginning to clench. Her eyes became half closed and she seemed nearly asleep.

"Her old man's going to wonder what the devil's happened to her," commented Shervington, and yawned. I yawned, too. I was beginning to feel pretty tired and surmised it was the unwinding

after the peak of nervous tension. I rubbed my eyes: they were smarting a bit.

"I think——" began Shervington, relaxedly, then broke suddenly into a fit of coughing.

"Got a silly tickle in my throat," he said, hoarsely, afterwards.

I felt a similar irritation, began to cough, and my eyes streamed tears.

"Something's got into the atmosphere here," said the skipper, looking around. Then: "Look at that valve! The damn fool!"

I looked at the valve on the tank of Plutonian atmosphere. It looked vaguely swimmy and it wasn't just because of my watering eyes: there was a faint mist hovering round the thing. The skipper cursed and dived at it, holding his nose. He spun the handwheel a turn or two and blundered back.

I felt a sort of heat prickle on my face, which might have been the sweat of fright or the touch of the escaped acid gas.

Phillips drifted down the ladder, carrying a notebook. "I've got this far, anyway. Shove it through the ether, Graham. . . . What's that queer smell in here?"

The skipper controlled his anger. "You didn't shut that valve properly. Some of the poisonous stuff leaked out."

Phillips stared at the valve. "I *did* shut it—tight."

Shervington shrugged and said nothing. I said: "Is that the atmospheric formula, Phil—you analysed it all right?"

"Eh? Oh, yes. It's deadly stuff. Can't understand how Pocahontas can flourish in it. A real lungful of it would kill any man—unpleasantly. Just this page, Graham—get it right."

I took the notebook to my signals niche on the upper deck. I looked at the page of chemical symbols and knew it would be a headache to "get it right" via the current ion-blasted reception. I felt even more tired.

However, I was spared that particular headache. The moment I pressed the mike button, the set went dead. No transmission, no reception. Obviously no power. I examined the leads from the power unit: they were in order. I removed the top of the set, peered into the ordered multitude of transistors. Down below them, in a near-inaccessible corner, a screw terminal had somehow worked loose and the end of the relevant power lead had become disconnected and drifted away.

I said something violent and idiotic, and hunted out a long, thin screwdriver. It had the tough razor edge necessary to deal with that slotted terminal. I fished again in the tool-chest, and then:

"Graham!" A double-voiced shout, urgent with alarm, came from below. I dropped everything and thrust myself down the rungs, clumsily, because my muscles seemed to have lost strength. The tang of the acid gas hit me like smelling salts. Shervington and Phillips were both fiercely gripping the handwheel of the valve which was obviously leaking again.

"Get the big wrench," panted the skipper, red-faced with strain.

I got it. He and Phillips thrust it between the handwheel spokes and jammed the head under a wall bracket.

"That'll hold it," said Shervington, jerkily.

"What on earth's going on?" I asked.

The skipper mopped his forehead. "We've caught a Tartar. Pocahontas is trying to kill us, that's all."

"What?" I stared at him, then at Pocahontas. Her eyes were quite closed now; so also were her hands, clenched into little fists.

Phillips said strainedly but with eyes alive with interest: "It must be psycho-kinesis—what else? The handwheel can't be turning itself—there's no reason why it should: no vibration or anything. It undoes itself slowly but with tremendous power. It took two of us all our time to shut the valve again and keep it that way."

"It's taken a lot out of me," said the skipper. "I feel as weak as hell."

"So do I," said Phillips.

"And I," I said. "And I haven't been exerting myself. Do you think she could be tapping our strength in some peculiar way?"

The skipper shrugged and said: "Frankly, I don't know what to think."

Phillips said: "I believe you're right, Graham. In some mediumistic way she's drawing off some of our energy and using it against us. Judging from her physique, unaided she wouldn't be able to turn that wheel against the resistance of any one of us."

"I've been in some peculiar situations in my time," said the skipper, "but nothing to match this. Seems we've to fight ourselves in order to stop ourselves from killing ourselves. Put the know-alls at the Institute in the picture, Graham—perhaps they can come up with a few helpful suggestions: they talk as if they know all the answers."

"The radio is out of order, pro tem." I told Shervington why.

"Bad maintenance," he grunted.

"Or psycho-kinesis," I joked, with a feeble grin, which became feebler when I and the others suddenly realised it might

be no joke, at that.

"Get it fixed, anyhow," said Captain Shervington.

I started to go, then impelled myself to the handwheel and hammered with my fist at the wrench. I'd spotted that it was being slowly withdrawn by an invisible hand. The other two had to help me before we could force it back in place.

Breathing heavily, the skipper said: "This is becoming impossible. This damn valve's got to be watched every minute. How the devil are we ever going to get any sleep? How can anyone go to sleep, anyway, knowing that someone's trying to flood the ship with poison gas? Phillips, can't you do something to make her unconscious? Drug her or something?"

Phillips scratched his head. "From the look of her she might be unconscious right now—maybe only asleep, maybe in a state of trance. Psycho-kinesis is subconscious force. She mightn't even be aware of what her mind is doing. It may be just the natural sense of self-preservation functioning automatically."

"Nonsense!" said Shervington, emphatically. "She's not merely trying to save herself—she's deliberately trying to murder us."

"Let's be fair," I said. "She didn't ask to be snatched away from her home, her people, her planet, never to see them again, condemned probably to die—for I think the odds are against our being able to keep her alive for very long."

Nobody had an opportunity to comment on that view. For, at that moment, the side jets of the ship began firing, swinging her round so that the sudden radial force pressed us tightly against one wall. Then the balancing jets steadied her and we were coasting along tail-first.

"Who the——" began the skipper, and then the main drive jets began blasting, decelerating *Icarus*, making the ceiling our floor and pinning us to it under several g's. The ship gradually lost impetus. Presently, we were able to crawl, painfully and with swimming senses, towards the upper deck—which seemed like the lower deck at first, but became lesseningly so—and towards the control console.

Before we could reach it, the deceleration was completed and acceleration in the reverse direction had begun. The upper deck was again "above" us, and the ship was hurtling nose-foremost back towards Pluto.

When we got to the console, we could do nothing effective to change the situation. We had six hands between us, and still

couldn't regain control of the ship. Admittedly, we had been weakened and were slow and our brains were spinning, and only the captain was an expert on the console. But even if we had been properly fit, defeat would have been difficult to avoid when switches, levers, and stud buttons wouldn't retain their position for more than two seconds after we'd taken our fingers off them.

A mind employing many streamers of force, the captain's own technical know-how, and our stolen strength, brushed our combined residual effort aside.

The tables had been turned. We were now the kidnapped, Pluto-bound.

We gave up and looked at each other's white faces.

"I'll pump her full of morphia," said Phillips, unsteadily.

"It's too late for experiments," said Shervington, rather shrill with nerve-strain. "This P.K. effect seems to be working at the speed of thought, and thought works a hell of a sight faster than organic processes. The morphia may take days to do its job—that's if it affects her at all. By then we'll all be dead. We must kill her first."

"No!" I exclaimed, shocked.

"By heaven, no!" exclaimed Phillips. "The Institute——"

"Blast the Institute! Their skins are safe."

"She's *my* responsibility," said Phillips, excitedly. "I want a living specimen——"

"Face the facts, you fool!" shouted the skipper. "We're not taking her back now—she's taking *us* back. To our deaths. It's her life or ours."

Phillips was leaning with his back against my signals desk. His knees were bent slightly under the steady acceleration. He clasped his head and muttered distractedly: "Give me time."

But his fate allowed him no time. Concurrently with the skipper's gasp of exasperation, Phillips also gasped. And with mouth and eyes wide open, he pitched forward, face down on the deck. The handle of my long thin screwdriver protruded from under his left shoulder-blade. The rest of the tool had skewered his heart.

As we gazed in horror, the screwdriver slowly began to pull itself from the wound. Shervington and I scrambled madly to the lower deck. As we reached it, the main drive cut out and free fall returned to confuse us further.

I saw the wrench disengage itself from the handwheel and float loosely around. The handwheel resumed its slow, inexorable unwinding. I fought my way to it and clung to it, but my feet failed

to find purchase and the wheel began to turn me with it.

The skipper had made for the lever operating the door of Lock Two. Surprisingly meeting no opposition, he yanked it over. The circular door at the end of the container swung open and the Plutonian atmosphere, under pressure, squirted out into the vacuum of space, carrying the drifting, weightless alien girl with it. Feet first, the beautiful body passed from our sight, and Shervington closed the door behind it.

The handwheel began to slow in its turning until at last I could stop it. No part of Phillips' strength could be used against me, and the girl must be using her own strength to fight asphyxiation.

Shervington hung on to his lever, afraid that she might try to force the door of Lock Two open again. But she made no measurable attempt. Possibly she knew, drifting and dying in space, that even if the door were re-opened, there could be no way back for her.

My grip on the handwheel was like having my finger on her pulse. I could feel the opposition gradually weakening. It must have taken her over ten minutes to die, for it was that long before I forced the wheel to a complete standstill.

The last few minutes were pure terror, for the bloodstained screwdriver came floating slowly down from the upper deck. It hung before my eyes like Lady Macbeth's vision of the dagger. Then it levelled itself and came at me, point foremost.

Luckily, it came so slowly that I was able to grasp the sticky and horrible thing and hold it off till Shervington came to my aid.

If the Plutonian girl hadn't divided her ebbing strength, I might easily have shared the fate of Phillips. I still have nightmares about that little predicament.

I said, shakily: "Thanks, skipper. . . . Objection withdrawn. You were perfectly right to kill her."

He made no reply, and directly it was clear that Pocahontas was dead he went to the upper deck. I followed reluctantly.

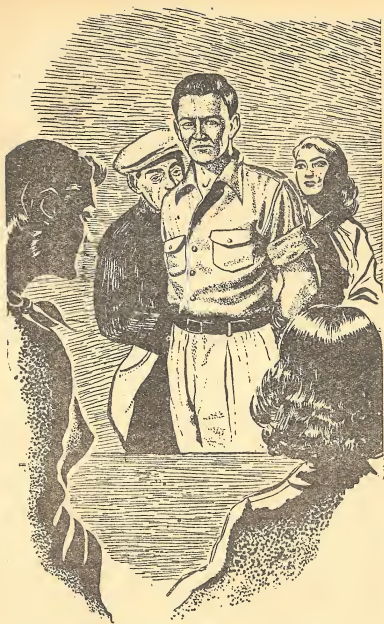
Poor Phillips was drifting a few inches above the floor. Between us we strapped his body to his bunk. Later he would have to leave us via Lock Two: there was no option.

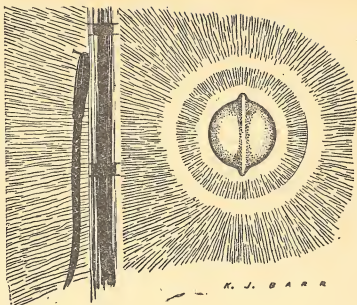
Then Shervington stared expressionlessly through a port at the shadowy bulk of Pluto, to which we were still coasting.

I heard him mutter: "The undiscovered country. . . . So it will remain. Perhaps for ever."

He turned *Icarus* about, and we defied augury and returned.

WILLIAM F. TEMPLE





Wisdom of the Gods

Earthly civilisation was tottering on the brink of disaster. Could it, even yet, survive the impact of that deadly alien information?

Illustrations by Kenneth Barr

SYNOPSIS OF FIRST THREE PARTS

Two hundred and fifty million years ago—give or take ten million—a spaceship crashed upon Earth. She contained a Galactic Intelligencer, an encyclopædia of galactic civilisation's knowledge. Over the years the spaceship vanished and the encyclopædia became entombed in coal. Today, the Ancient Railways Preservation

Society, headed by Lord Ashley (known as Jeffers) and Beagle, a nuclear physicist, and Rodney Winthrop, a mathematician, run a small railway from the village of Nether Ambleton. Walter Colborne, a historian, is the stoker of the engine, the Saucy Sal. Colborne's sister, June, is seriously ill with cancer and all surgery has failed.

Colborne inadvertently throws the encyclopædia on the Saucy Sal's fire. In the explosion, lines of mental force radiate and implant scattered items of alien information in the minds of people on the train and in the surrounding countryside.

Nether Ambleton becomes cut off and paratroopers stand guard. Sir William, head of Nuclear Intelligence Department Five, and his chief agent, John Roland, together with Colonel Starkie of the military, and Superintendent Brown, of Scotland Yard set up an Operations Room over the Golden Lion and attempt to track down all people on the train in an attempt to collate the information they received. Sally Picton, a local reporter, was on the train. Neither Lord Ashley nor Beagle received any alien information.

Colborne, who received a vast amount of alien knowledge, is appalled at the prospect of answering questions for the rest of his life. When a boy makes a deadly violet beamed gun from a toy and kills his friends and wrecks a street of houses, Colborne decides he cannot give up the information in his mind. He is sent to hospital for a check up and on the way back his ambulance is shot at by a .22 rifle from the woods.

An American, Hackensack, received from the encyclopædia religious information and declares that he sees in letters of fire that the world must wait for the gods from the sky.

Brigadier Graham has received the first part of a formula for a weapon which he says will make cobalt bombs look like Christmas crackers. Colborne has the rest of this information but refuses to divulge it. He is convinced that more harm will come to the world from this alien knowledge than man himself can invent. Pressure is brought to bear on him in a friendly way by his associates in the Railway Society, but without success. Later, he goes to see Sally in her lodgings. A man tries to intercept him, but Sally sees them and raises the alarm, and soldiers drive the man off.

Then Colborne realises that he has the plans for a machine that is a defence against the violet beam weapon made by the boy but if he reveals this, then, through the Pandora's Box Effect, the rest of his knowledge will be dragged out, including the ultimate weapon partly described by Brigadier Graham.

He manages to cut a tape with the defence machine formulae,

disguising his voice. This arouses his friends' suspicions; but they are still not certain that Colborne has recalled his alien knowledge.

When the encyclopædia exploded a group of girls on horseback had been near; now proof comes that there is a gang hiding out in the woods between the village and Polder, where a nuclear power station is being built. A mock attack is staged, and Colborne, frightened for the well-being of Sally who has disappeared, runs to the woods where he was fired at. A girl on horseback takes him—with a .22 rifle in his back—to the gang's camp. Colborne realises that they have been impregnated with alien information and believe themselves to be aliens stranded on Earth.

Sally is also a prisoner with him. Eventually Colborne is brought before a woman whom he cannot see in the darkness outside her tent and she tells him that she has received information that was provided for aliens stranded upon a planet. She has the knowledge to take over a civilisation on a par with that of Earth's, and Colborne knows that she can do this. She aims to set herself up as the first woman dictator of all time. From Colborne she demands the rest of the knowledge she needs to make her task easier.

Colborne refuses to assist the woman—who calls herself ma'am—in her scheme to conquer the world. He fully understands that with the alien knowledge in her possession she can do what she wants; but he will have nothing to do with it. Ma'am is very insistent that he join her, and when he refuses, threatens to torture Sally Picton.

Colborne decides that if he has not given up the secrets of the ultimate weapon to his friends, he cannot tell this woman secrets that will make her taking-over of the Earth easy. Ma'am's lieutenant is told to take Colborne into the tent where Betty, ma'am's chief aide, will torture Sally until Colborne agrees to help.

Colborne says: "Go on. Flay her alive! I won't talk!"

CHAPTER XVII

That shocked tableau held in the glowing interior of the tent, with the lamp's rays falling on the whip in Betty's hands, on Adkin's grimy shirt, on the tortured, blood-stained hanging thing dangling in its bonds from the tent pole. Panting, barely able to speak, filled with sick revulsion, Colborne said again: "Go on, whip her! I won't talk."

The crooning groaning stopped. It stopped on a choking

gurgle. The silence intensified that feeling of staginess, of this moment being a segment cut out of time, to stay exactly the same until the end of the Universe.

Then, in a shocked voice of utter incredulity, Betty said: "You mean you won't—but you can't! This is the girl you love! You can't stand by and see her tortured!"

"I thought you was a man," Adkins said, spitting.

Colborne said nothing. He stood with his brooding eyes fixed on Sally's white and blood-stained back.

Betty shifted the whip in her hands. Then, half-heartedly, she lifted it. She looked across at Adkins, a look of appeal, of helplessness, a look that drew from Adkins only a muttered growl and a jerk at Colborne's bound hands.

"I'm going to take the skin off her back," Betty said, licking her lips. The quirt gleamed in the light, smooth brown leather rolled into a weapon of torture that could rip the skin from Sally's back in long bloody strips. Betty drew her arm back. Colborne pressed his lips together.

Sally spoke. In a voice that whispered huskily, as though speaking through a throat full of pain, she said: "Walter. Please. No more. Don't let her hit me again. I can't stand it." She swallowed noisily, and her shoulders moved awkwardly, the muscles rippling under the skin of her arms, twisted upwards as they were. "Please, Walter. Tell ma'am what she wants to know."

Colborne said: "Well, Betty? What are you waiting for? Ma'am told you to whip Miss Picton until I talked. I'm not talking. Why don't you whip her?"

Again that breathless hush of unreality swept back. One moment they had all been acting under the prod of angry and overpowering emotions; the next they were caught in a web of play-acting. Colborne thought he was right; but the chance was a terrible gamble, the chance that he was wrong.

He had to urge this thing to its conclusion. He said, huskily: "Don't stand there, Betty! If ma'am has told you to whip Miss Picton—then why don't you do as she says?"

Adkins gave him an ungentle shove. "Swine!" Adkins said. "Why don't you speak up?"

Sally had swung in her bonds so that now she hung with her back to Colborne. He stared unflinching. She moved her auburn-haired head sluggishly. "Please, for God's sake, Walter. Tell them! Tell them!"

Colborne laughed. A high, cackling, almost insane laugh. He

trod back on Adkins and felt the man's instep crunch under his heel. "It's no good," he said. "You'll have to whip her until she's a carcase. Sorry."

The voice of ma'am sounded; hard, imperious, full of frustration and yet carrying that steely ring of final determination and implacable intention. "It's useless. Betty, he knows. Well, don't just stand there! He's found out, at last."

Betty dropped the whip. She gave a jerky step forward. Adkins took the opportunity to repay Colborne's stamp, with interest. Colborne said: "Ow!"

Ma'am said: "Well, get on with it, Betty. Cut me down."

Under Colborne's mocking stare, Betty took up a knife and cut through Sally's bonds. Sally turned to face Colborne as soon as she was cut free. She massaged her wrists. Her dress still hung in tatters around her waist.

"Well, Walter. So you'd let me be whipped to shreds just so you could keep your secrets to yourself?"

"Don't fool yourself, Sally." Ever since Colborne had sensed this impersonation, his emotions had been chaotic. He still couldn't reconcile his half-aware feelings towards Sally Picton with his instinctive antagonism towards the megalomaniac ma'am. He both hated and loved her. He knew, quite simply and sincerely, he knew, that this would-be dictator ma'am was nothing like the real Sally. Sally had had her brains addled by the explosion. Poor kid—she'd really been on the sticky end.

"I thought you liked me, Walter?"

"I—liked Sally Picton. I knew you wouldn't let yourself be whipped." He smiled nastily. "And you can wipe all that lipstick off your back now. Blood runs, you know. And the whip clogs with blood, too. Whipping a person is a disgusting business; it's nothing like the lady like scene you presented to me." His stare was rude, challenging. "And you can cover yourself up. You might catch a chill in this night air."

She snatched up a windcheater, angrily slung it about her shoulders. "Damn you, Walter! If you know so much about whipping, then we'll have the disgusting scene—with you as the principal actor. Adkins!"

"Yes, ma'am?"

"Lash him up. Tight."

Adkins complied with relish. Strung up to the tent-pole, Colborne felt his shirt ripped down the back. The night air cooled the feverish chill on his skin. He shivered.

"Go on, Walter. Shake in your shoes all you like. This time, there's no saving you."

He struggled to keep his voice composed. "I'm surprised at your methods, Sally. I would have thought that, thinking you know how I feel about you, you would have suggested we went into the dictator business in harness. I'd have probably been a sucker for that—with you."

She mocked him with her laugh. "Not a chance! I saw the way you reacted when Lord Ashley and the others tried to get the information from you. Your damn principles and your stinking wishy-washy ideas of what is right and wrong—hell, Walter, you're as proud as a church deacon."

"You couldn't be sure."

"I know you, Walter. I knew just what your reaction would have been." She moved towards him. "All right. I want that information and I'm willing to do anything to get it. I'll offer you a partnership. You and me, Walter, together." Her tones sharpened and her voice rose. "You and me, together, to rule the world! And we can do it. Easily! With the knowledge we have, pooled, no-one can stop us. All the guns and tanks in the world couldn't stop us."

"You're right. Brute force couldn't."

"So you'll come in? You'll give me what I want to know—you'll team up with me." Her quick, impassioned flow of words faltered. "But, of course, you won't, will you? I know that. I told you, before. You'd rather be cut to pieces by a whip than lose a single shred of your own estimation of yourself. Well, Walter, it's shreds of your skin or shreds of your character. I don't mind which it is—"

"You didn't even wait to see if I'd join you."

She faced him, reached out and, twitching his head to face her, and staring deep into his eyes, said: "Well? Go on, then. Tell me. Will you?"

Colborne hated pain. He feared it and loathed it. He almost dreaded it in others as much as he did for himself. He knew that he was a coward. He guessed that he wouldn't stand much from the whip wielded by the heavy and powerful Betty. But he couldn't go down without trying, without seeing just how far his principles would sustain his courage. And, anyway, he might faint before they'd got anything out of him.

"Well?" Sally said again, her soft lips firmed into a hard merciless line. "Will you?"

"No."

"Ah." She drew a deep breath and then released his head, pushing his face away. Colborne heard her say, in a tone of voice devoid of emotion: "Start, Betty."

He tensed up. He couldn't help the premonitory tightening of his muscles, the wincing away and the horrible gulf opening in his stomach.

He must have fallen backwards into a vat of molten metal. At the same time as he realised he no longer had a backbone, the top of his head came off. From that gulf of nothing in the centre tendrils of flame spread out over his entire body. His skin became so sensitive that he knew he could tell if an eyelid blinked within a foot by mere air currents alone. He didn't know if he was screaming or not. His mouth was open. He sucked in a great whooping draught of air. The glowing interior of the tent came back into focus. He felt sweat starting out over his face. He suddenly had a back again and it throbbed and stung and pounded in every nerve with unbearable sensation. The top of his head descended and fitted his face—and then the whole thing happened again. Only this time it was twice as bad.

He tried to speak. He tried to get the obstinate words through his mouth. He wanted to cry out: "Stop! Stop! I'll talk! I'll tell you anything. Only for God's sake, stop!" But, unaccountably, he couldn't make his mouth and tongue and vocal chords obey his will. He swallowed, convulsively, and then the third stroke fell.

He lost interest in his surroundings after that. He had time, just before his tired mind slid beneath a billow of darkness, to think, sardonically, that he hadn't taken much punishment. But that wasn't the important thing. Weakened by fatigue and hunger as he had been, he had had no reserves of strength to call upon. The important thing was that, so far, he hadn't told these people what they wanted to know. When he awoke to bleary consciousness, it didn't seem of great significance that he couldn't bring to mind just what it was that they were after.

He had heard stories of men being tortured for information. There was a point beyond which nothing anyone could do to the hulks which remained could mean anything. Of course, he hadn't been anywhere near that. That came after long periods of intensive interrogation. But he knew, too, that a man could get into the habit of saying: "No." Even after he desperately wanted to say: "Yes." But this was fantasy he was building in his sick mind. He had been.

struck—how many times—four, five, half-a-dozen blows?—the thing hadn't really begun yet.

He opened his eyes and saw that it was daylight. He had been moved from the tent and lay in the open, on grass that still sparkled with silver dew. Trees overhead made a lacy pattern against blue skies and somewhere, hatefully, a bird sang. A shadow fell across his face.

"Wake up, hero."

The toe of Adkins' boot prodded his side.

"You fainted. And then I guess you must have gone off to sleep. Which was a very good thing, see. Now you're all freshened up, you can be asked to answer certain questions." Adkins laughed. "Understand?"

Colborne understood well enough. They gave him breakfast, with a dire prediction that he'd sick it all up within the hour. He drank water until he felt like a distended balloon. Then the whole grisly business started over again.

Colborne's back ached as though he'd been flogged—well, he had, hadn't he? Each movement brought a twinge. Adkins laughed. Sally—or ma'am, as he thought he'd better think of this demented woman—was conspicuous by her absence. He felt a vast pity for Sally. He could clearly envisage Sally as a distinct entity, a person apart from ma'am. For ma'am he had a pity, a revulsion, a feeling for something unclean. All of which didn't help him much when he was to be flogged until he gave her the rest of the knowledge she needed to make her conquest of the world a fact. And he knew with absolute certainty that he would give it to her. He couldn't take any more of the sort of punishment he had endured last night.

They strung him up to a tree. Betty, fresh and rosy in the early light, appeared, swinging her quirt negligently against her leather clad leg. Colborne shut his eyes.

He heard ma'am's voice in the distance, coming nearer. She sounded anxious. Intrigued, Colborne turned his head and opened his eyes.

A man Colborne had seen before was walking with ma'am. He was big and tough, with the craggy face of the out-of-doorsman. He had run a little too fat, and his walk was heavy and assured. He seemed to have the habit of putting his hands in his vest armholes—he wore no coat—and twiddling his thumbs. Colborne didn't like the look of him.

"Adkins," ma'am said sharply. "Get everything packed up.

We're moving. The damned soldiers are getting too nosey. We're breaking out of the ring. Keep your eye on Colborne." She looked grey and drawn in the morning light.

"All right," Adkins said. Then added: "Ma'am."

"I know all this area like my own garden. We'll break out near Polder. They won't expect that."

"They know we're here, then?"

"Yes. Macnaughten, here, has all the news. Come on, step lively."

The camp began to break up. Yes, Colborne thought, Sally would know this part of the country. She had been born and brought up here. She could keep out of the way of Colonel Starkie's soldiers easily. He stood apathetically, his hands bound in front of him, watching.

There seemed little anyone could do, now, to stop ma'am from taking over. The devil of it was, Colborne knew she could do it quite easily without his information. He knew how to influence the masses—she had the control over individuals. He could see no future at all. No future for him, or for the country.

At that moment, with the camp in a turmoil, the sound of an aeroplane floated down to them from the bright morning sky. Everyone looked up.

A four-engined transport droned over the trees. Black blobs dropped from it. White and coloured parachutes opened like puffs of smoke. Clumps of parachutes supported heavy equipment. The military were moving in. The soldiers had struck first.

CHAPTER XVIII

A helicopter scudded in low over the trees, dipped, hanging like some nightmarish bat, and then swooped to a landing behind a row of blackthorn hedged trees. Another followed. Around Colborne the confusion was rapidly arranging itself into ordered activity as the girls of the riding school and the odd men caught up in this wild scheme packed their belongings onto horses and disappeared in groups into the wood. They worked as though ma'am had trained them for years instead of for the few days they had been at large. That showed the power of the knowledge that had blasted from the alien encyclopædia.

"Come on, Walter," ma'am said briskly. "Start walking."

Obediently, Colborne preceded her and the large and quiet

Macnaughten. Adkins had gone off, giving crisp orders and sending the riders scattering ahead, bending to avoid low-hanging boughs. Noises in the woods scaled down to the familiar leafy rustle and scutter of tiny things.

Walking ahead of the others, Colborne reflected on his chances of escaping. There had been not the slightest possibility of that up to now. But now, with the dramatic arrival of the paratroopers, his chance had come. He must make a break for it inside the next fifteen minutes. Later on ma'am would be well clear.

Thinking of escape reminded him of Lord Ashley and Beagle and Winthrop and the Saucy Sal. He thought of the lovingly tended steam engine, her bright parts winking in the sun and her great driving wheels seeming ready to spring into motion at the flick of a finger. He sighed, and tripped over a tree root. Cussing, he staggered back onto his feet, awkwardly with his hands bound, and glared round at ma'am.

"Don't make so much noise, oaf!" she said fiercely. "Those damned soldiers must be hereabouts."

Colborne perked up. "If you'd untie my hands I'd be able to get along better."

Macnaughten said heavily: "Not on your life."

Ma'am said with acerbity: "I give the orders around here, Macnaughten. He stays bound. And both of you keep quiet." She looked ahead into the green dusk of the woods. "There's a dry ditch running along there. We'll go down it as far as the stile. That should take us clear."

The ditch rustled and shivered with plants and animals as they dropped into it. At this time of the year it was dry, as ma'am had said, and there was no great accumulation of dead leaves to betray their presence by crackling. The main difficulty was in forcing a way through the abundant greenery at all. But it did afford good cover. Darting a glance upwards, Colborne saw that they had emerged from the woods—a single line of trees paralleled the ditch—and they were making their way between open fields.

Now was his chance.

He had long since given up any idea of making a run for it. Macnaughten would be on him in a trice. But he could draw attention to himself.

And then an odd thought occurred to him. What had the Galactic Intelligencer to say on this problem? Quite deliberately, he posed the question. Then a little grimace quirked his lips. Nothing. No answer to how to get away hung in letters of fire

against the screen of his brain. But he was willing to take a bet that the encyclopædia *had* contained that information. Either someone else knew that, or it had been whiffed into the eternal nothingness along with the bulk of the encyclopædia's information.

He had to carry through his own plan. He was creeping along in front of the others. He staggered to his feet and ran clumsily forward, tripping and stumbling over the green mat. He shouted. Loudly. He strained his lungs and went red in the face, his neck muscles cording, his whole body convulsed with the effort.

Standing out darkly against the brightness of a young cornfield, figures in green and brown camouflage moved towards him from the middle distance. In the brief interval between beginning to shout and the moment when he ceased to shout—abruptly—he saw at least four soldiers running. He waved his bound arms before his face. They must have seen him! This was the turning of the tables——

And then a tree fell on his head and he went out like a puff of thistledown in a gale.

His awakening this time was less pleasant. His back and head had joined forces to send wave after wave of agony coursing through him. He lay for a time with eyes shut, existing merely in a bed of pain, gradually absorbing the meaning of the sounds he could hear about him.

If this sort of thing went on much longer, he'd be flattened one time and wouldn't recover. His body, out of training and only just beginning to toughen up with the summer occupations, couldn't take unlimited punishment. Ruminating on that, he knew it couldn't take much more.

He lay, listening to the bustle around him. From the sharpness of footfalls, he guessed he was in a room. He did not have the courage to open his eyes. He didn't want to let anyone know he was conscious; he wished to delay for as long as possible his return to the ugly world of reality.

There was, of course, no possibility that he had escaped. He was enough of a realist to face up to that. Macnaughten must have sprung on him from the rear and clouted him over the head with, as no doubt the police would phrase it, a blunt instrument. But he had hoped the soldiers would get to him in time. This was another mark to ma'am's efficiency and knowledge. She'd extricated her nomad group from the perimeter, got them out by Polder way, probably, and was now—well, where were they?

Cautiously, Colborne opened one eye. He was looking directly

at a rectangle of lightness. Redness overcast the sky, and there was a hint of chill in the air. Evening, then. A girl sat near the door, her chair tipped back. Across her knees rested a rifle. Apart from that, and the bare, austere look of the place, there was only a poster on the distempered wall to guide Colborne. The poster said: DOG LICENCES. The rest was a blur of overinked print.

So he was in a police station.

Some time later the implications of that were borne in on him. He stirred, gripped by astonishment. A police station! Then—then ma'am must have opened her campaign!

Police stations of this austere official type did not crop up with remarkable frequency in the country. The local village constable lived in a cottage that doubled as the station. They must be in a town, a town of some size. Beyond Polder way? He tried to remember what towns lay in that direction. Vaguely, he recalled driving through a twisty-main road with a huddle of shops, a church and three or four pubs—what was it called? Larkwood? Larkspur? Something like that. It didn't matter. What was important was that ma'am must feel herself strong enough to begin her task of taking over. A small beginning, a flowering——. He knew from the alien information implanted in his brain what would follow from that. She could take over the whole country before it had realised what had struck it. And then the world.

After that, with what she felt about the possibilities of future science and if someone had received from the encyclopædia details of the construction of a spaceship, she would go on to an attempt on the stars.

And who was there to say her nay?

"Come on, slob, wake up." A shoe connected ungently with his ribs. Adkins had arrived. Colborne was hustled through the town. People moved through the streets in an apparently normal way; shops were open, business was being conducted. But he wasn't fooled. That Adkins, striding along with a rifle under his arm and a man with bonds on his wrists thrust before him, attracted little attention, indicated more pointedly than anything else that the whole viewpoint of the town had changed. Moral values had altered direction.

Adkins wore an armband of some blue nylon material, and Colborne saw others, men and women, with this badge of the new order. Some things, then, followed a set pattern.

Ma'am was brusque with him. "Haven't time to bother about you now, Walter. This is only the earliest stage of my plan. If the

military ran me out of Nether Ambleton area, then, with or without your immediate help, I must make a new base. Larksthorn will do for a start. As soon as we have about a twenty miles radius under control, I'll come back to you for the next steps." She smiled frostily at him. "Just brood on it, Walter. Nothing is going to stop me. Remember that. Face it. You'll talk, when I want you to. Now you can go back and be lodged in a cell."

Back in the cell, this time with the door closed, and locked—iron bars did not feature in the country town's gaol planning—Colborne sat on the edge of a wooden chair and picked up the papers that had been tossed in. He guessed that ma'am had given him the news so that he should not be in any doubts that the rest of the country was ignorant of what was going on here. But only one item had the power to interest him.

Very briefly, a small squib said that Mister Hackensack, the industrialist turned prophet, had renounced all his teachings. He had, the paper said, been unable to account for his seizure by dreams and visions. He had apologised profusely, apparently, and managed to get off with a stiff wiggling from whatever American court of justice had had him hauled up before it. Questioned on his 'apocalyptic stroke from on high', he had said, testily, by all accounts, that it must have been something those Limeys fed him at London airport disagreeing with his Middle Western ulcers.

Colborne sat back on the hard wooden chair and threw the papers in a fluttering white cloud above his head. They looked like the doves of peace to him. His face wore an imbecile look of happiness and joyful stupefaction. He shook his head from side to side, like a runaway metronome, quite unable to think, speak or laugh.

He sat, his wits slowly coming back, for some time. He was aroused to full awareness by a girl bringing food. It seemed that starvation and misery had no part in ma'am's plans to break him down. Colborne ate with relish. He sat back afterwards, considering.

It all boiled down to a simple one-word formula.

Wait.

Now he needn't bother about stalling ma'am off. He could promise to co-operate, hedge, stall, play for time. Anyway, she couldn't bring her grandiose schemes to fruition in time. Not now. Not after the straw in the wind that was Hackensack.

As for Lord Ashley and his friends and the rest of the jig-saw that would make up the most frightful weapon the world had ever

known—that problem would be taken care of with every stroke of the clock. He had only to wait until he could legitimately say, along with all the others, that he no longer had the information. He stretched luxuriously—wincing as his back pained—and then lay down on the bed to catch up on his sleep.

Everything seemed cut and dried. No troubles at all—except, maybe, making sure that he was clever enough to tell ma'am what she wanted to know in large enough doses to avoid being whipped, but not so fast as to give her too great an area of domination before the vital information petered out of all their brains.

He closed his eyes. Everything was lovely. Perhaps the best thing of all would be that he would be able to find out how June was coming along. He felt the worst kind of ingrate when he thought of his sister. There the poor kid lay, suffering from cancer that no one apparently had the remotest idea of how to cure completely. . . .

Slowly, Colborne sat up on the bed. His eyes were glazed. There was a loud hissing in his ears. There, hanging in words of fire in his brain, was the first half of a complete and final cure for cancer.

Someone else must have the rest of that knowledge. And here he was, a prisoner. And there June lay dying. And with every tick of the clock the person who had this vital information was hurrying towards utter forgetfulness.

CHAPTER XIX

"Except for Walter Colborne and Sally Picton, they're all present and correct, Sir William," John Roland said. He was flushed of face and his hair was on end. He had just spent a hectic hour shepherding all the passengers aboard the train into the identical positions they had occupied on the fateful day. It had not been easy, even with the aura of chill and grim efficiency imparted by the watchful military.

"Very good, John. The scientists happy?"

"Yes, Sir William. Happy as children playing with a hand grenade." He nodded towards the train. A posse of earnest scientists, with technicians helping, was swarming over the carriages, measuring angles, running tapes from the fire box where the explosion had taken place. They were building up a composite three-dimensional picture of the course of the information exploding from the alien encyclopædia.

By the time a few hours had passed and everyone was hot and

tired and thirsty, the job was finished. Now they knew almost exactly—as accurately as they would ever know—just what information had radiated outwards and what brains it had impinged upon during its passage. One man, sitting in the front of the train, just obscured a small portion of the head of a boy sitting two carriages towards the rear. Take the information the man had, throw the half-completed facts at the boy—expect to come up with the rest. Sometimes, it worked. Too often, they were sadly aware that one man had much of the first half of entries in the Galactic Intelligencer and until they could question him, they wouldn't know what questions to put to all the others behind him.

"This damned man Colborne's a nuisance," said one of the government scientists, glaring at Lord Ashley.

"I quite agree," Lord Ashley said imperturbably.

"That tramp feller, Tom What's-'is-name, was asleep in a field," John Roland said, butting in. "And we know about the horse riders. The only one left is Hackensack."

"I'm expecting a reply from the agency on that," said Sir William. "He's disclaiming all knowledge of the affair now, you know."

"You know what that means," Lord Ashley blew through his moustache. He, in turn, glared at General Abercrombie and Colonel Starkie standing beside the Saucy Sal. "I hope you soldiers find Walter before the lot vanishes."

"We will." Abercrombie spoke first, throwing Colonel Starkie off whatever he had been going to say. "And when we do——"

"When you do, general, you will bring him to me, pronto!" There was more steel in Lord Ashley's voice than had ever gone through the gates of Toledo.

He turned sharply on the government scientist.

"I'm interested in Colborne's wellbeing—and in the wellbeing of his sister." He dug his stick viciously into the permanent way. "Have you found anything so far that might be any form of cure for cancer?"

The government scientist's rimless spectacles shone in the sunlight as he shook his head. "No, my lord. There's been absolutely nothing on cancer from anyone here."

The opening of the wooden door found Walter Colborne standing stupidly before his gaoler, both his arms upraised and shooting pains running in lines of fire from elbows to fingers. He must have been hammering on the door for a long time. He had no recol-

lection of the interval between his recognition of the partial cancer cure and this moment when the surly gaoler stepped in and said: "What's all the row about?"

"I want to see ma'am. At once! Jump to it!"

The gaoler had once been a policeman. He had discarded his blue uniform when he had changed his allegiance from the Queen to ma'am. He now wore light summer clothing with a blue knotted ribbon round his arm. Somehow, to Colborne, all these people who had been talked to by ma'am, and who had thereby, through the wiles of alien science, become her pawns subservient to her will, seemed to have lost their individual identities. He could feel no kinship in humanity with this ex-policeman. He was just a body and a face and a blue ribbon.

"She's out of town. You'll have to wait. And keep quiet."

"I must see her." Colborne tried to push past.

The gaoler seized his arm. "Oh no you don't! Get back in there, sonny boy." He gave Colborne a push.

There was no conscious mental command to his muscles. Had there been, it is very likely that nothing would have happened. In the event, Colborne was sucking his knuckles and staring dazedly down at the unconscious man on the floor.

He had never knocked out anyone in his life before.

He had no time now to analyse the sensations caused by this fascinating new deed. He bundled the man into the cell, locked the door on him, and went smartly out of the police station's main door, knotting the stolen blue ribbon around his own arm.

That had only been so ridiculously easy because the gaoler had been expecting no violence. The value of surprise, which value Colborne prized through his extensive researches into the campaigns of long ago, had once again paid off.

That was something that extra-terrestrial science hadn't taught him.

He attracted no attention as he went towards ma'am's headquarters. She had taken over the historic Corn Exchange, leaving the Town Hall to the dignitaries of the Council who were now her willing puppets. It appeared to Colborne that the town was normal; but he sensed the undercurrents of passion and unsteady violence that simmered, ready to break out on the single word of ma'am. It alarmed him. Those long-dead aliens had the power to disrupt and destroy a civilisation. It had been merely a part of the information they carried about with them, ready to be used if the need should have arisen. But with the broadcast scattering of their star-begotten

wisdom, like any fresh and heady knowledge, it had toppled the sanity of those who had received it. It was much like pouring radical ideas and book-learning into darkest Africa. Spontaneous combustion was bound to follow. Years would be required to assimilate the alien wisdom. He hadn't got years. He had to find what he wanted to know about curing cancer within hours, minutes, possibly.

Ma'am was out of town. She had gone with an armed retinue to take over the next fair-sized town. The buses were still running. Feeling that the action was fantastic, that it was an intrusion from the Arabian Nights, Colborne bought a ticket and settled down for the bus journey.

Apart from the different orientation of church to pubs, the next town was the same as that he had left. He was directed to ma'am's temporary headquarters, and marched rapidly up the driveway into the "Lord Nelson." Ma'am was holding state in the saloon bar. People were gathered around as she talked, and it was very obvious that she had the alien power to influence personalities, to sway people's emotions and through the manipulations of individuals to dictate an overall policy. And that policy meant a world that Colborne could only contemplate with horror.

The blue ribands were well in evidence; but the guns were discreetly hidden. Ma'am looked up, saw Colborne, and she stopped speaking with such abruptness that people's heads turned to scrutinise the intruder.

"Why, hullo, Walter," ma'am said pleasantly. "How did you get here?"

"I must talk to you at once, urgently, Sally. It's a matter of life or death." The words sounded no more dramatic or musical comedyish than they in fact were.

She frowned, then excused herself, and walked with her usual composure over to Colborne standing at the door.

He was reminded irresistibly of the time he had first met her, in the tea-room at the Bay, just after the explosion. Her short auburn hair shone in the sunshine slanting in through the door. Her figure was neat and trim in jodhpurs and green shirt, with a yellow scarf casually knotted round her neck. She looked all the things in a girl that a man needs.

Colborne had to remind himself with severity that she wasn't Sally Picton any more. She was ma'am. With that his determination crystallised. He would have to double-cross her, treat her as a dangerous lunatic; if necessary, he'd have to—but his mind refused

to accept that inescapable line of reasoning. He smiled, his mouth dry.

"My people are all about, Walter," ma'am pointed out gravely. "Have you decided to join me?"

"Yes." Colborne watched with clinical interest the flare of passion in her eyes. "I'm willing to give you all the information I have that you ask for. But there's something I must know. I believe that even you will understand."

"Go on."

"You know about my sister June. I have the cure to cancer in my mind. But—but only part." He licked his lips. "You were in the direct line with me—your brain received the tag ends of stuff that started in mine."

She smiled. "I know that. 'Too well. So, you want me to give you the rest of the cure."

"Please."

Slowly, each swing a stroke of doom, she shook her head. "Sorry, Walter. I don't have that information."

"At least," he said bitterly, "you're honest. How about the others of your people?"

"I can ask. I don't believe they have."

"You have to be asked in a certain way. Only by asking what follows on what I have can you tell for sure." He spoke with desperate urgency, outlining what he had of the cancer cure. "Anything there?" he asked at the end.

"Sorry, Walter. But," she went on with determination, "we can do a deal. I'll check my people. You know, you're the only person I can't seem to influence. Those soldiers you called to your assistance in the ditch—now they're some of my most enthusiastic supporters. Must be the alien stuff in your mind. If we don't know the answer——"

"Then I'll have to go elsewhere."

"I don't think I could allow that." She looked past him, through the open door. "Here's Adkins." Her eyes swung back to Colborne. "My God, Walter. Did you escape?"

He didn't bother to reply. He'd already guessed she thought that he'd been brought here. He turned sharply on his heel as Adkins said loudly: "There he is!"

Any return to captivity would mean the end of his hopes to find the cure for June. It was evident that ma'am hadn't realised the significance of the Hackensack episode, and that therefore she didn't realise a term had been set to her wild schemes. She'd aim to keep

him locked up until he broke down, and with the bait of finding out about the cure for him, she'd guess he would break down very rapidly.

As Adkins entered, Colborne took a step towards him and kicked him in the stomach.

"Surprise, you so-and-so's!" he shouted, and dashed out the door and down the short gravelled driveway. This business of hitting people was infectious. The bulky mass of Macnaughten was levering itself from a car with its engine still running. Macnaughten had a Sterling sub-machine gun slung over one shoulder—a gun he must have acquired from the soldiers tamed by ma'am—and his movements were in consequence awkward. Colborne did not pause in his headlong sprint. Momentarily, he expected the crash of bullets into his back.

"Hey!" Macnaughten started to say. Then Colborne hit him, a wild swinging blow that did not do much damage apart from dazzlement. He followed that up with another kick, and Macnaughten went down, green in the face and hands clutching his abdomen.

Colborne leaped into the car, a dark blue and lavender Zodiac, and with the open door swinging crazily, sent the car roaring down the main street. He was thankful for the twisty old-world road. As he rounded the corner past the grey lichen-covered stone walls of the church a despairing burst of fire sounded and the rear window smashed to pieces. The big speedometer erupted into a shower of glass shards. Colborne felt a sharp sting on his cheek.

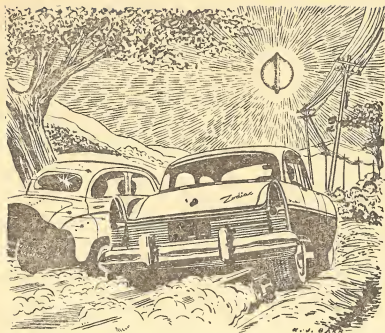
Then the old stone walls were between him and the "Lord Nelson" and he was under cover.

He was shaking all over. He pressed down savagely on the accelerator and the big car leaped down the country roads. Pursuit would begin immediately, he knew that.

The world and its problems seemed infinitely remote under the prodding impact of his need to find the cure for June. It was a desperate chance; but now he saw quite clearly what he had to do. Things had boiled up until they had come to a head; before him lay one solitary objective and he didn't care what he did just so that he did that one thing.

CHAPTER XX

Walter Colborne took one hand off the steering wheel, reached out and slammed the door shut. He increased the car's speed as



he left town and headed along white and leafy country lanes. Frequent glances in the mirror showed no pursuit. That was a matter of time. He thought of Adkins and Macnaughten and the surprised looks on their faces when he had hit them. He could not think of Sally.

Somewhere, someone *must* have the rest of the cure for cancer. In a reactionary release of all his pent-up emotion and frustration, in the breaking down of the feeling of suffocation under which he had been living during the past days, and in a happy willingness to surrender himself to overpowering forces of circumstance, he was glad to have to think of one thing and one thing alone. Gone were his self-doubts and fears that his course of conduct was not only selfish but criminally lunatic. He didn't care now what he did, just so that the one central fact—the cancer cure for June—was given into his possession.

He was driving without consciousness, thought or effort; his imagination was already ahead of him, weighing what he was going to say to Lord Ashley. A cheerful little Austin Seven rattled along a straight stretch of road ahead; in a smooth swoop, he cut over to the wrong side of the road to pass. His first reaction was surprise.

The back of the Austin Seven erupted into a shower of yellowed glass. Ugly gashes appeared about the mudguards. A single quick flick of the eyes into the rear mirror showed him the black car swinging on to the crown of the road after him and two men clinging to the opened windows, shooting at him with sub-machine guns.

He drove like a maniac. Perhaps, at that moment, Walter Colborne was a maniac. He could not allow himself to be stopped, now that he had come so far. He almost collided with the large-tired armoured car rolling towards him and he barely scraped past, ripping off an entire wing panel as he did so. He had no time for thought. The officer in the A.F.V. must either have sized up the situation remarkably quickly, or perhaps he was acting on pre-arranged orders to cover this sort of eventuality.

The armoured car's gun belched. Colborne didn't see the effect of the shot on the pursuing car. He caught a glimpse of the black body turning over like a fairground ferris-wheel car, then everything slid out of his vision. He drove on relentlessly.

A green car flying a starred flag from the radiator cap fell in behind him and paced him along the country lanes. Trees and hedgerows passed backwards like a jerky film being re-reeled in a nightmare. More soldiers and tanks appeared to right and left. Colborne went straight through the royal road they left open.

He had recognised by now the fact that they knew who was driving the car. These army men, by following their orders to allow him through, were favouring his own designs. He had a tight feeling in his chest and blood from the cut on his cheek flowed saltily into his mouth.

Nether Ambleton was not as he remembered it. It looked more like one of those sacrificed villages blasted in a Civil Defence exercise; where soldiers show eager shop assistants and clerks how to deal with the fires and rubble left by a hydrogen bomb dropped fifty miles away.

The Golden Lion might well have been Supreme Allied Headquarters during any recent conflict. Colborne brought the Zodiac to a tyre-torturing halt outside, opened the door and jumped out. As his feet hit the ground he started running. A hand fell on his arm and brought him to an abrupt standstill.

"Hullo there, Walter! Glad to see you again."

Lord Ashley, leaning into that invisible wind, was standing smiling genially down upon him. Beagle and Winthrop stood smiling by his elbows. Colonel Starkie and a general Colborne didn't recognise stood scowling a little way off. Other people he recog-

nised came running from the open door of the Golden Lion. Soon, he was the centre of an excited but expectantly silent crowd. Lord Ashley had taken command of the situation with that imperturbable good humour that was never seen ruffled in public.

After Colborne had seen the little Austin Seven shattered and the armoured car in turn wreck his pursuers' car, everything had happened in a daze. Now that he had escaped, had reached safety, the experience came as an anticlimax.

"I escaped," he said, coughing a little. He put a hand up to his cheek. "I'm all right. Look, Jeffers, I must talk to you alone——"

"Questions we must ask," the general said, stepping forward with an air of taking over.

Lord Ashley introduced him as General Abercrombie. "One moment," Lord Ashley went on smoothly. "Walter—you know that people will soon forget what they learned from the G.I.?"

"Yes. That's what——"

"Very good. Look, Walter, I'm your friend. You believe that, don't you? I wouldn't advise you to do anything against your own best interests."

"I say," Beagle interrupted, his long yellow face animated. "The poor feller's just escaped. He's hurt. Why don't we all go inside and have a drink?"

Lord Ashley nodded decisively. "Good notion, Beagle. And we can get Cremieux to look at that face of yours, Walter. Whilst we talk, that is. There's not a minute to lose." He turned and marched briskly inside, his hand warm and friendly on Colborne's elbow.

"I want to make a bargain, Jeffers," Colborne said as soon as they were inside the bar. Nothing had gone as he had expected. There was an uncomfortable lack of the spontaneous friendship he had automatically expected. But, what the hell—he was holding back information for which these men would sell their souls, wasn't he? What did he expect; the red carpet treatment?

Lord Ashley cocked an eyebrow at him in silent appreciation. Beagle and Winthrop looked, each in his own way, surprised. The soldiers had efficiently set up a barrier and the three men and the two military stood talking in a little oasis. Colborne looked around for John Roland. He felt that he would like that quiet man's support.

"Did you know I'd escaped?" he asked.

"Oh, yes," General Abercrombie said. "As soon as your car

hit the main highway, we had you spotted." He moved his hands casually. "Tell me. Larksthorn, isn't it?"

"Yes. Though much good it will do you." Colborne rapidly outlined the situation, finishing with a bitter: "But as soon as you send soldiers in, they'll be converted, like the others were."

"I see. Well, we'll see."

"But this is wasting time!" Colborne tried to control the heavy thumping of his heart—and gave up a job that was physiologically impossible. "I'll make a bargain, Jeffers. I'll give you everything you want to know in return for one piece of information."

Lord Ashley's face did not change expression. But his hands tucked themselves firmly inside his jacket pockets. He looked like a man about to swallow a teaspoonful of hideous medicine. "Go on, Walter."

"I have the cure for cancer——"

"The devil!" exclaimed Beagle.

"What did you expect?" Lord Ashley said sadly. "I'll be frank, Walter. I was hoping to find such a cure in the information we have and use it to bargain with you. I'd have been unable to sleep well the rest of my life—but I'd have done it. But you already have it. You have so much. When I checked that we did not possess a cancer cure—or anything on cancer, come to that—I was almost relieved. But, Walter, I was also sorry that we weren't going to have a lever, to shift you, after all."

Colborne just sat there speechless.

Lord Ashley went on: "Anyway—you were talking about a bargain. How does cancer come into it?"

Beagle cleared his throat. Colborne just sat. He didn't know what his face looked like; it must have been rather horrifying from the others' expressions. Beagle said gently: "We've kept in touch with Saint Angelo's. I'm afraid there's little hope—something went wrong——"

"Something—went—wrong——" Colborne said.

"If you have the cure, Walter," Winthrop said testily, "then everything will be all right. Let's get hold of Cremieux and get him to translate it and phone through right away."

Colborne roused himself. Well—he had been so confident that someone would have the cure that failure had come as more than a shock; it was as though the impossible had suddenly become commonplace. And he still had a bargaining point. Of course! He came alive with animation again.

"Listen, Jeffers. I'll give you what you want—that ruddy

suicidal bomb, everything—if you can find me the man or woman who has the rest of the cure in their brain. You see—I only have half of it.”

“I—see!” Lord Ashley’s words came on a great indrawn breath. “I see!”

“I’ll give you all I know on it. Cremieux can interpret, where necessary. Get all the people who were on the train that day, fire the stuff at them, and get their answers. You probably wouldn’t have been sure they didn’t know without that.”

“That goes for the rest of the information you have, Walter.”

“Sure. We’ll have time. Hackensack was on the edge of the explosion, a good distance off. His knowledge faded early; the rest will hang on for a time.” His face tightened as his muscles jumped. “It has to! That’s the only way I’ll co-operate.”

“Very well, Walter. If that’s the way you want it.”

Winthrop stroked his stomach. His face was sour. “Pretty quick to give us all these terribly wicked secrets, aren’t you Walter, when there’s something *you* want to know?” He said: “What happened to your highfalutin scruples?”

“Winny!” said Lord Ashley.

“I say——” said Beagle. But his heart wasn’t in any defence of Colborne right then.

“I know,” Colborne said without feeling. “I deserve all the filthy names you care to call me. I’ve had it coming to me for a long time, I suppose. But things look a little different when someone you love lies dying and you almost have the cure in your hands.” His face was very pale. “It’s maddening! Something inside you seems to choke you up; your hands itch to do something, to smash, to rend, to destroy—it’s ghastly. I tell you, friends, I’ll give you the secret of how to poison every mother’s year old baby if I can save my sister. Funny, isn’t it? How loyalties and principles crumble when they run up against the old thalamus in full stride. Hell’s bells and buckets of blood! I know I’m a louse, a coward—all the things you care to name—but I can’t sit idly by and watch my sister die!”

“All right, Walter,” Lord Ashley said quietly, into the hush. “We’ll check everyone.”

“But they’re all spread over hell and gone!” protested Winthrop.

“So we contact them.”

“But the time!” Colborne started up, agitation fluttering his hands and making his stomach heave. “There’s so little time left!”

"We know where each person has gone. At least, John Roland does. We can contact them all by telephone and have Cremieux speak to them. We'll corral a horde of people, get a full scale operation under way." His fine old Edwardian face was frosty. "We need the information you have, Walter, for the betterment of mankind in general. You have had the whole situation in the wrong perspective. More good will come of this than bad, believe me." He sighed. "That the leap forward of the human race, for a good century in a matter of days, must depend on the fate of one young girl—it's a queer commentary on human behaviour."

"Perhaps the human race isn't worth all this bother?"

"Don't talk rot! We—that is, all mankind—haven't come so far against all the dangers we've surmounted just to blow ourselves off this little planet. Don't you believe it. We've a hell of a lot to do in the future, and this Galactic Encyclopædia is like having our future course charted for us. We won't go soft from having secrets of the Galaxy dumped into our laps. It'll spur us on to greater striving. *We* need what *you* know, Walter."

"Yes," said Beagle, softly. "We need what you know, Walter."

"Well—get those telephone lines humming." Colborne spoke with determined toughness and callousness. God knew, he couldn't feel cynical about it, not any more. But if June died because he hadn't done all he could—then—then: "If she dies, you'll freeze in hell before I tell you a single thing."

Abercrombie began to say something angrily. Lord Ashley hushed him up quickly. He began to issue orders in his cool, cultured voice and, as usual, things happened fast. Colborne spoke into a tape recorder microphone, detailing what he knew of the cancer cure. Then John Roland, walking brightly in and buckling down to it without waste of words and with a smooth, grim efficiency that heartened Colborne, issued lists and started the long process of telephoning everyone who might possess the other half of the cure.

It became a lengthy, drawn out process. Food and drinks staled and became cold as the hours dragged on. The lights went on and still the long-distance calls went out and the names were crossed off. "Tell them to stay near a phone at all times," Lord Ashley ordered. "We'll be coming back with other questions later."

"I hope so," said Colborne. "I hope so."

"We will, Walter. I feel it in my bones." He hesitated, and then said: "Just in case—would you like to record the rest of your

knowledge? I can supply you with plenty of starting off points beside the bomb. Interesting scientific stuff—pure science, that is. Maths. Winny's mad keen to——"

"All right." It would be something to do. "Although, my knowledge will be the last to fade. I was nearest to the explosion."

The night passed somehow.

As John Roland's blue pencil inexorably crossed off name after name on his list, Colborne's feeling of suffocation increased. From time to time he found himself staring down at the list, rigid, arms braced on the table, and seeing nothing else in all the world save June's young face, white and twisted with pain. It was strange how a man's whole conception of the Universe could be changed by the fate of one insignificant person. How even those things a man considered sacred could be as easily brushed aside as a clinging spider's web in the darkness, as soon as they interfered with the dictates of his own nature. And yet, however contemptible he might consider himself, he knew quite simply that he couldn't change. He had to go on. Nothing mattered now beyond the immediate objective of finding the cancer cure. He didn't even bother to think about any possible future after that.

Towards dawn, haggard, unshaven, red-eyed, he forced down a cup of coffee and turned, sickened, away from the proffered food. The list was down now to four people. One after the other, the blue pencil went slowly through their names. The police had roused local people from their beds, questioned them again to the accompaniment of tired curses against the ill-luck of ever having been on the train that day, and reported back their failure. Even old Tom the poacher had sworn blind 'e didn' know nothing about it, s'welp 'im.

"And you say those damn fool women riding horses didn't receive this information, Walter," Lord Ashley said. He had freshened up and now looked as poised and imperturbable as ever. "I'm afraid it looks as though it's no good, then. We're both the losers."

"After all, Walter," pointed out Winthrop. "It's not as though you've lost anything. No-one knew how to deal properly with cancer; and you'll have to look at it in the light that we still don't."

"Go to hell, Winnie," Colborne said despairingly. "I know. I know that I hold half the answer. Can't you see the difference between that and not knowing anything at all? Can't you see how that tears me to pieces?"

"That's how we felt about the scientific aspects of it all, Walter," Beagle said gently.

Winthrop said: "I grudge every minute you've kept me away from this latest information of yours, Walter."

Colborne turned on him. "I suppose *you* don't have what I want to know in that one-track brain of yours?"

Winthrop's indignant denial was cut short by the eruption into the room of General Abercrombie, with Colonel Starkie trailing along behind rather like a tug being swept along by a runaway liner. John Roland, carrying his blue-pencilled list, followed. He looked helplessly at Colborne.

"I've had enough of this nonsense," Abercrombie started, blowing out his cheeks as he spoke, giving an impression of bluff heartiness quite foreign to his nature. "This is a very simple matter of National Defence. Colborne here has military secrets which it is his duty to deliver up to the Crown. Any bargaining is right out of the question." He glared with much bristling of eyebrows and moustache at Colborne. "You understand, Colborne. This is a serious matter and you are committing a very grave offence."

"All I understand is that you've carefully waited until the bargaining idea has fallen through because your side hasn't got what I want before you took up this stupid attitude." Colborne felt his weariness overpowering him, making him reckless with the betraying drug of fatigue. "As far as I am concerned, I know nothing that you want. And you'll oblige me by getting to hell out of here."

After Abercrombie had simmered down, Colborne added: "Tell me. What's happened about Larksthorn?"

"We're moving in today. Big operation. You'll have to understand, Colborne, that you are no longer a free agent. You'll be conscripted into the Service; then you'll have to——"

"You can't do——"

"But we can. Your commission as a second lieutenant—a suitable rank, don't you think?—will be through as fast as the machinery can manage it. Then you'll sing a different song, me lad."

"I didn't mean that. You and your sabre-rattling—to use an out of date expression dear to an historian—don't mean a thing. I fail to see why it is necessary to make a so-called big operation of Larksthorn. Don't you realise——"

Abercrombie interrupted. His face was purple, and his interruption, also, was of that colour. Colborne didn't recognise more than one word in three. He waited until the general had run out of first-line breath, and then said quietly: "You know, general,

that knowledge of the encyclopædia is fading from people's minds? Well, then, in a short time things will be back to normal. No need for violence at all."

"No need! No need! Here you have a gang of people—a gang getting larger every day—a miserable collection of cut-throats who have thrown off their allegiance to this country and are nothing but out and out rebels." He gestured violently at Lord Ashley. "You've explained what these people are. They're nothing but a bunch of aliens, of extra-terrestrials, wearing human bodies. We've got to exterminate the lot of them. It's the only safe course."

Colborne thought of his blows of the day before. He said: "You understand force, general. What would it cost me to sock you on the chin?"

"Now, now, Walter," said Lord Ashley, a little uneasily. "The general doesn't understand the scientific side of things too well." He winked at Colborne from his disengaged side. He went on speaking, riding over the general's threatened eruption. "Well, now, Walter. It seems we don't have the rest of the magic formula. What are you going to do?"

The nagging feeling that after all, nothing really mattered any more, had been creeping like a palsy over Colborne. When all was said and done, what right had he to stop other men from blowing themselves to bits? He wasn't God Almighty, with powers of life and death. Although—looked at dispassionately, that's just what he did have. And the responsibility was proving too much for him. He couldn't think clearly about June any more. Whatever he did, a nasty little tendril of fate licked out like a serpent's tongue and tripped him up, so that he fell with his face in the mire. One thing was certain—he wouldn't do anything Abercrombie wished. That was for sure. And even that was a pitifully inadequate, a childish, reaction of petulant frustration.

"Give me a microphone and the reports you have from the infected people you questioned. I'll give you all I know, except—I'll have to think some more about the bomb." It was an evasion. He was still trying to take the weakling's middle course, and keep his fingers clean.

"I'll take your other stuff out and get onto all those people again," offered Roland. "They're going to love me."

"Everything I have, everything we all have," Colborne said dully. "It's all yours." He shook his head and waited until the sparks of depression had cleared. "Everything except the one thing I want. I suppose that's life."

The morning passed slowly—from the viewpoint of waiting for anything to happen. It passed with extraordinary rapidity from the viewpoint of getting through the work before all memory of the Galactic Intelligencer faded from the minds of the people who had ridden on the Saucy Sal that day.

Towards noon the mass of wordage was being reduced to manageable proportions; Roland reported good progress. Colborne found he couldn't care less. He brooded. He wondered just what he would do, now, in these changed circumstances, when the time came for him to make up his mind. Having given up all the information he could until the last few people's batch of knowledge was presented to him, he took a stroll in the Golden Lion's gardens. The sun was warm, and flowers drooped fragrantly in the heat. It was very quiet. Winthrop walked out, a paper in his hand, and came up to him.

"I say, Walter—don't mind me. Sharp tongues cover an embarrassed sympathy, you know. Or so I'm told. Look. What do you know about——" He had screwed up his eyes and Colborne guessed he was mentally reviewing some fragment of knowledge he had received from the G.I. An outrageous expression flashed upon his face. His eyes popped open—he looked as though he had sat upon a nail. "Walter! It's all gone! The encyclopædia! Gone! Vanished!"

"So it's come, then. You were at the tail end of the train. Gradually, the knowledge will fade from different people, here and there, in accordance to their seating. I'm not really able to bother, now." He clenched his fists. "Even if someone—someone we haven't found yet—had the cancer cure, it's going, it's fading from their brain, now, as I talk to you."

"I'm—I'm sorry, Walter," said Winthrop.

"You know, I'd have sworn Sally had it. But she was too taken up with being ma'am. Silly girl—damn stupid woman. What'll happen to her when the knowledge fades?"

"She doesn't know?" Beagle had walked out to them.

"No."

"Could be nasty. Reversal of affection—you know."

"I hadn't thought of that. But no—it couldn't."

"It might. Reaction. Shame and hatred leading to——"

Lord Ashley walked out, striding purposefully, and standing straight up. "I've managed to detain Abercrombie from beginning his tomfool 'operation'—and now that the knowledge is fading, I've convinced him. We've established telephonic communication with

Larksthorn. One or two people there are beginning to realise just what they've been doing. They ask for strong police detachments to be sent in. There's going to be trouble."

Colborne's tiredness lifted. Sally—Sally was going to be Sally again. The thought cheered him, even with his deep depression over June clogging his emotions.

John Roland leaned from a window. He looked alarmed. "I say! Walter! A phone call for you—from Larksthorn." He looked around. "Come quickly—I've bypassed the soldier-boys. You've got about three minutes—then I'll have to tell them."

Colborne sprang into the air, caught the window ledge and hauled himself into the room. His shirt ripped. The old tears when it had been torn from his back opened and he angrily shredded it away with one hand as he took the phone from Roland with the other. "Hullo. Colborne here."

"Walter! Oh, Walter!" She sounded as though she was speaking from the bottom of a half-empty wine-vat. "It's horrible! I'm barricaded in the Town Hall—they've gone mad. Mad, the lot of them. They're like wild beasts. It's the opposite effect, I suppose—listen—did you hear that?"

He had heard a dull, far-off booming.

"Yes. Are you all right?"

"They're breaking down the doors. All right? Yes. Oh! Yes—I'm out of the nightmare. And, Walter—I'm sorry. Truly, sorry. I didn't—look—listen carefully—I know the rest of that cancer cure."

"*You know!*"

"Yes. I wanted to bargain with you—wanted to play it clever—be ma'am—but you escaped. Walter—I——"

"*Tell me!*"

She began to speak, rapidly, almost incoherently. Colborne saw that John Roland had cut the extension into a tape recorder. Sally had not spoken more than a half-dozen words before the distant crashing magnified, crescendoed into a dull, ominous roaring. Something pinged sharply in the earphone.

"They're through!" Sally's voice became ragged. She tried to speak and Colborne heard her gasps. "It's no good. I can't make it. Goodbye, Walter—goodbye. I'm sorry for everything."

"No, Sally! It can't end—not like this——"

"Goodbye, Walter." There was a confused shouting, a dull animal baying. He heard a sharp scream. Then, quite clearly,

came Sally's voice. "Walter—I love you! Goodbye—bye . . ."

The phone was dead.

CHAPTER XXI

The sharp, claw-like stings over his back roused Colborne in the helicopter to a realisation of his surroundings. Someone had exploded with wrath at sight of his back and Doctor Cremieux had been hastily summoned. Now, with the good doctor tinkering on him as they winged through the summer air, his head was clearing. John Roland sat at the controls with a terrifying grimace. Lord Ashley, still imperturbable, sat with Beagle and Winthrop in the rear section. That was the helicopter's full load. As far as Colborne knew, other men—soldiers—were also on their way to Larksthorn. They were going to check the riots that had broken out. Colborne was going to sit beside a grave.

"There might yet be time, Walter," Lord Ashley had said. "I know the Town Hall there. Big old rambling place put up in the middle of the last century when they thought the railways were bringing prosperity to the town. Old rooms that could still contain dust from Dizzy's boots. She'll be



able to hide—get away—don't worry, man. She'll be all right."

"And what she alone knows?"

No-one answered him.

After a little, Roland said huskily: "Anywhere in town I can land? Or shall we put down in the main square?"

Lord Ashley said: "You can land on the Town Hall roof, John. If you blow some of the rate-payers' slates off that'll serve to remind them of the way they've behaved."

"Wilco."

Colborne could see a second helicopter fluttering along like some great black spider hanging from a thread. He looked at it, and then said: "Don't let that ass Abercrombie land there before us, John. There might not be room enough for two helicopters—and I'd hate to have to land on top of his. But I won't wait for him."

"All right."

The journey he had driven at such reckless speed the day before with the Tommy-guns after him was now covered in half the time. The helicopter slanted down, sliding past the grey stone church, hovering over the main square with its horse-troughs and cobbles and electric street lighting and then with a whooshing rush of wind, settling like a great bat on the Town Hall roof. The town was in a ferment. Men and women rushed through the streets, carrying sticks and hammers and chair-legs, converging on the town's centre. Colborne could feel the mob violence rolling up in heavy waves.

There had been so much of violence in the quiet countryside since that explosion of the alien encyclopædia. A small object from the stars had created what could have been—what would still be—a world-wide upheaval. He wondered fleetingly, as the helicopter swayed, what lay in store for humanity when at last it had thrown off the shackles of gravity and soared out into space. If this was any sort of foretaste, then the future would be a very lively place—a very lively place indeed.

His limbs were cramped from the ride and there was an aching stiffness over all his body; but he jumped from the helicopter nimbly enough. He could not repress a gasp at the pain from his back as he landed. Then he was running towards the first skylight he could see.

The glass was already smashed. Looking down, he saw a long dingy corridor, with doors on either side. As good a place as any to start the sort of search he had in mind. Something seemed to be

sucked from the world, and he was aware that the helicopter's engine had been shut off.

In the new rush of sound the baying of the mob below floated up, frighteningly loud. This must be the second wave. The first, those he had heard over the telephone, must have been her blue-arm banded bullies. He wondered if Adkins or Macnaughten had been in that maddened lynch-mob, or if they had been driving the car that had been after him; the car that had been blown up.

He kicked the rest of the glass in with his heel. John Roland appeared at his side, calm and composed. Roland took off his coat, laid it over the barred wooden slats between the gaping holes where glass had been. Then, with a chuckle: "This beats high-diving!" he plunged bodily through the skylight in a splintering chaos of wood and glass and fluttering clothing. Colborne took all that in his stride. He dropped down after Roland as though he entered buildings in this fashion every day of his life.

Lord Ashley poked his head through the hole. "You all right, John?"

"Yes. Nothing broken, thanks, Jeffers."

Even then Colborne felt a flash of pleasure that Roland was calling Lord Ashley Jeffers. They both ran down the passage. All the doors were shut. No sounds disturbed the quiet of the old building, save the long faraway thunder of the crowd outside in the square.

"She's probably down below somewhere. In the back quarters," Roland said, running easily. "No sound from that mob on the telephone."

Colborne knew, then, what he expected to find. A crumpled, broken and bloody body, huddled in a dusty room. The sort of unnecessary, obscene, anti-human sort of death that made the whole of life meaningless.

Running along beside Roland, he felt in his pocket to make sure the scrappy sheet of foolscap was still safe.

The inner vision of Sally lying crumpled and smashed persisted. If she was dead—even if by some miracle she was still alive but had forgotten the cancer cure—the sentence of death would have been passed upon June. If that did happen, then Walter Colborne found with a strange emptiness in him that he didn't much care what the rest of the moronic world did about blowing itself up. His own personal interest in life would have been taken away. Oh, yes, there would still be his work; he'd go on, bumbling about dusty manuscripts trying to find out how the minds of people had worked

hundreds of years ago; but that would take up only a minor portion of the spark that was himself. He hadn't seen it so clearly before. A man is made up of many components; but some of those parts are more important than others. If the props of a man's integrity to life were knocked asunder, then the rest of him collapsed like a wax idol in the sun.

Which was a fine piece of confused thinking and metaphor mixing—somewhat excusable due to the circumstances, Colborne decided, and rattled down the curving stairs with Roland at his heels.

"The Army's arrived," Roland panted out.

Colborne could hear extraneous sounds through the pounding of blood in his veins and the thunder of ideas in his brain. From the confused clamour he deduced that Roland was right; the Army with Abercrombie on a metaphorical white charger at its head was dispersing the mob. That was one pain off their necks, at least. So far, here in the Town Hall, they had come upon no sign of occupancy. They made no effort to conceal their presence. The hollow reverberation of slamming doors followed their progress.

Nothing.

When at last—in an oddly chastened spirit—they found her, the scene was almost too vividly what Colborne had imagined it to be, for him to enter the wide musty room.

He stood at the door, looking in, as Roland and Lord Ashley and his friends crossed the floor. Their feet made loud vulgar sounds. It was exactly like witnessing the last act of an opera from the front row of the stalls. The heroine—dying, say, of consumption and singing with village lustiness the while—the various sorrowing relatives standing about and soaring into complementary song at the least excuse. Apart from the silence, which only made the illusion the more gruesome, the feeling of staginess was strong upon Colborne.

Betty, her head a pulped red mass, lay in dog-like devotion at Sally's feet. One or two dead men, their blue arm ribands dreadfully spattered, lay in a cluster where Betty's gun had emptied itself. Sally—the telephone receiver still clutched in one hand—and a dead man lying on top of her, with a depression in his skull that would exactly match the receiver, Colborne guessed—Sally lay limp and white and like a flower accidentally broken from its stalk.

Roland looked up sharply from his knees beside her.

"She's just breathing Walter."

Cremieux said in his precise way: "Badly injured. But I think we can save her. Here, like this——" He began to do things with

objects taken from his black bag. Colborne turned away. Anticlimax. The dead man lying on her must have prevented the final act. Betty had been loyal, to the end. Now the rest of her murderers were being rounded up by the Army. It didn't feel right, somehow. Everything was real again. The operatic effect had been spoiled at the last. But then—that was like life, wasn't it? Nothing turned out in the way you expected. He knew that he loved Sally. What their relationship would be in the future he did not know; he could feel only that now he needed deep peace, a little corner into which he could creep and sleep and forget.

Some time later, with Sally lying upon a hastily made-up pallet, she opened her eyes. She smiled at him. Her first words disoriented his mental attitude. "Walter—did you know that the *Encyclopædia Britannica* contains over thirty-eight million words? Over thirty thousand subjects? And that only covers in outline one single teensy-weensy planet." Her auburn hair flamed against the white of bandages. "We were dealing, with the G.I., with the knowledge culled from a whole stellar civilisation, a galaxy-wide culture. Too much for us, Walter." Her lips were bloodless. "Too much."

"Quiet, Sally. Hush. You're going to be all right. But you must save your strength. It's all over."

"Look into your mind, Walter. Do you still——?"

He summoned something up, casually. No words of fire appeared. The encyclopædia had at last blown itself out.

"All gone, Sally. All gone. But you're the important subject now——"

"I'm sorry I—did what I did, Walter. It wasn't me."

"I know."

Lord Ashley said, gravely: "So the bomb has gone, too, Walter?" He sighed. "Thank God for that. Now I don't have to be driven by my duty. Whilst it was possible for the country to acquire it, I had to press on. Now—well, I'm again a private individual, able to say—'To hell with the hell-bombs.' I can live with myself again."

"You mean?" Colborne started. Then stopped. Sally was imploring him with her eyes. He bent closer.

"In my pocket, paper——"

He took it out and read the rest of the cancer cure, neatly written in Sally's handwriting. It was all there, like the heavens opening and the angels descending in glory.

When the room had steadied down around him, Cremieux said gravely: "I'll get through to Saint Angelo's at once. This will take time, naturally; but I think you can take it for granted that your sister will be restored to full health."

Colborne couldn't say anything. He fingered the paper in his pocket. He might have guessed that Sally would do the same thing as he himself had done. And that left him in a cold and solitary limbo between the crushing millstones of opposing ideologies. His supreme moment had come.

Although every man lives alone in the world, he yet bears responsibilities and ties to the rest of humanity; at that moment Walter Colborne felt the whole awful weight of his sole responsibility. It was for him—and him alone—to make the decision.

Beagle said: "A pity about that weapon. But still, the exercise in piecing it together from what we have will be good practice." His long yellow face lit with enthusiasm. "I'm looking forward, rather, to the job. Most interesting."

"Most," agreed Winthrop, stroking his stomach.

"I can't say how relieved I am," Lord Ashley said, smiling fondly at Sally. "Funny how Mankind always seems to muddle through to the right answer. Even in matters as grave as this."

"Uh—about that bomb," Colborne said. "Abercrombie—"

"I'll handle him. The right answer. Yes, most appropriate."

"You mean—we'll get the infernal thing, when we're ready for it, with all the practice we're having with the current horrors?"

"The bomb, Walter?" Lord Ashley blew through his moustaches. "Good Lord, no! I meant—how convenient it will be for you to have such a charming and attractive wife when you take up your new position as historian—"

Colborne's fingers crumpled the paper in his pocket.

It was always there, insurance. It would be there, for as long as he lived.

It was always difficult to know what was right in the conflicting claims of the modern world. It was inevitably hard to puzzle out what was right. But when you had the right answer at last, it seemed as though it had always been with you, easy of accomplishment, fixed, not to be questioned.

"Yes, Jeffers," Walter Colborne said, looking at Sally. "Yes, I think we're all going to get along very well from now on."

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First Breakthrough

A factual survey of the very latest scientific information telemetered back to Earth by the Russian and American Space Satellites

Just over one year ago the first artificial satellite was launched. To date six have been placed in orbit and already a wealth of information in many scientific fields has been collected by them and transmitted to Earth. Much of that information has still to be studied and assessed, and is still coming in, but a preliminary report can now be written describing this new, major breakthrough in the struggle of Man to overcome the barriers that up to now have kept him out of cosmic space.

The first sputnik, weighing 184 lb., was placed in an orbit ranging from 118 miles to 600 miles above the Earth's surface and made 1,400 revolutions before plunging to incandescent destruction in the Earth's atmosphere. One month later, Sputnik II, half a ton in mass, and with the dog Laika on board, was projected successfully into an orbit of minimum height 133 miles and maximum height 1,054 miles. This satellite lasted 2,400 revolutions, ending its life on April 14th, 1958.

The first successful American attempt, Explorer I, launched on February 1st, 1958, weighed 30 lb. and had a perigee of 219 miles and an apogee of 1,587 miles (above the Earth's surface). Explorer I should last until the end of 1962. Vanguard I, with a 4 lb. satellite, was launched soon after,

on March 17th, into an orbit of perigee 410 miles and apogee 2,500 miles. Its lifetime will be many years long.

Explorer II was unsuccessful, but Explorer III was placed in orbit on March 26th and had a mass of 30 lb. Since the perigee was of order 100 miles it lasted a short time only, ending its life on June 28th.

On May 15th, the Russians once again shook the world by launching Sputnik III, weighing 1 ton 6 cwt. into an orbit of perigee 140 miles and apogee 1,200 miles. Equipped with solar batteries and a whole laboratory of instruments, this unmanned satellite is in the form of a cone 5 ft. 8 in. in diameter and 11 ft. 7 in. in height.

It can be estimated, from information released by the Russians, that the rocket vehicle that launched Sputnik III was probably about 300 ft. high and some 400 tons in weight. Their ability to control such masses can be judged from the fact that, on entry into orbit, errors of 50 miles per hour and a half a degree can be fatal.

So it appears that at least one group of scientists and technologists on Earth can at will deposit one ton of useful payload into an orbit above the Earth's atmosphere. This achievement is emphasised if one realises that in terms of energy requirements, a

satellite in a few hundred miles orbit is already nine-tenths of the way to the Moon.

The Americans, at the time of writing, have tried one Moon-shot which unfortunately was not successful. Another U.S. attempt is expected shortly and no doubt a similar Russian programme exists. However the Soviet scientists have stated that they are more interested in putting up a manned Earth satellite and tentatively give a date of 10 years hence for its accomplishment. They may well be estimating somewhat pessimistically.

Leaving the hardware that deposits the satellites in orbit, we come to the information they have collected. Some of their findings confirm earlier theories based on vertical rocket shots and other methods of sounding the upper atmosphere but a large proportion of the data relayed to Earth has painted a much more detailed picture, in some cases surprising the scientific world.

There are three ways of obtaining information from an unmanned artificial satellite—firstly, by observing its orbit visually with or without a telescope, secondly, by using radio methods of observation (such as the Jodrell Bank telescope) and, thirdly, by making the satellite radio transmitter send back in code the information collected by the instruments in the satellite.

The first method, carried out by Moonwatch teams and other groups all over the world, gives the orbit of the satellite and enables plots to be made of the changes in it. These changes are due to two main causes, the ellipticity of the Earth and the drag every time the satellite at perigee

enters the last wisps of the Earth's atmosphere. The fact that the Earth is not a perfect sphere causes the satellite's orbital plane to precess like a spinning top while the perigee point moves in the opposite direction in this plane. Formulæ exist connecting these rates with the degree of flattening of the Earth and results so far collected show that the Earth is not quite as oblate as scientists had thought. It was also hoped to increase the accuracy of our knowledge of distances on the surface of the Earth by triangulations, but observations are not yet accurate enough for this purpose.

A much better knowledge of atmospheric density at high altitudes (of importance to ballistics) has been obtained from the decay of satellite orbits. The original elliptic orbit gradually becomes circular with the perigee decreasing very slowly and from then on the satellite spirals in rapidly. Results indicate that previous density estimates (based on indirect data such as the Aurora Borealis and the heating of meteorites) have been too small by a factor of five to ten. In addition to this it has been possible to detect the daily and latitude variations in the atmosphere due to its unequal heating by ultra-violet, X-ray and other solar radiations.

The second method, namely radio observations of the satellite, is of aid in establishing the orbit in which the satellite moves. The frequencies at which the radio transmitters in the satellite signal to Earth are known and these can be compared with the frequencies received. The changes are due to the approach and recession of the

satellite to and from the observer (just as a jet-plane's engine sounds shriller as it approaches the observer, then falls in pitch as it passes overhead).

In addition, the radio rising and setting of satellites has been recorded and compared with optical rising and setting. Radio setting occurs later than optical setting, while radio rising precedes optical rising. The time differences determine the magnitude of the deflection of the radio beam which depends upon the change in concentration of electrons with altitude. For example, the concentration of electrons at a height of about 300 miles was found to be about 16,000,000 electrons per cubic inch. Information such as this helps in our understanding of the interaction of the Sun's ultra-violet radiation with the atmosphere.

The third method of collecting information, by installing instruments in the satellite, is useless unless the information is telemetered back to Earth. A wide variety of devices was incorporated in the first satellites. In Explorer III and Sputnik III, recorders memorise the data accumulated by the instruments, releasing the information to ground stations as they orbit over them. Among the apparatus in these satellites are devices designed to register the number of hits of micrometeorites, the pressure and composition of the atmosphere in its upper layers, the concentration of positive ions, the strength of the Earth's magnetic field, the temperatures experienced at such levels, the composition of cosmic rays and their concentration, and the intensity of solar radiation. In addition, in

Sputnik III, a special thermal regulating system was incorporated which, by changing the coefficients of radiation and reflection of the sputnik's surface, ensures a suitable temperature range for the normal operation of the instruments. This was done by installing on the satellite's surface 16 shutters which are opened and closed by means of electric drives.

Figures for the number of micrometeorite hits agree with previous estimates. For example, it is estimated that about 3,000 tons of micrometeorites of about 4 ten-thousandths of an inch diameter fall onto the Earth every twenty-four hours.

With respect to cosmic rays, results released by the Americans and Russians agree in part only. These very high energy particles, originating in the most distant realms of space, are important to the future of interplanetary travel. If they are too intense, they would injure a human being before he had spent more than a few minutes in space. Their distribution over the Earth's surface is uneven, since the Earth's magnetic field deflects them.

An analysis of data obtained from Sputnik II shows that the intensity of cosmic rays increased by about 40 per cent. from an altitude of 140 miles to 440 miles. The increase is due mainly to the diminishing of the screening effect of the Earth itself. The data should also shed new light not only on the Earth's magnetic field but also on the magnetic field due to sources outside the Earth.

According to preliminary reports to members of the National Academy of Sciences, the American Physical Society and the

Washington scientific community at a meeting in May, 1958, very high intensity cosmic rays were found by the American satellites Explorers I and III. Reasonable cosmic ray activity was measured at altitudes below 600 miles but at altitudes greater than about 680 miles an intense radiation field was detected equivalent to at least 60 milliroentgen per hour. In radiological health it is accepted that the recommended permissible dose for human beings is 0.3 roentgen per week. The radiation found by the two Explorers is 0.3 roentgen in 5 hours or less. These figures must not, however, be taken as final. Obviously a long-period programme of satellite research must be undertaken before a complete picture of the circum-Earth radiation fields, their nature, intensities and distribution with time and space is obtained. The results already gained, nevertheless, help to show the value of satellite-based instruments in charting these regions.

The main effects on the dog Laika of her space-flight in Sputnik II can be included here. The changes in the main body functions were converted into impulses which were fed to the satellite radio transmitters and finally registered on the ground. In this way respiration, cardiac activity and blood pressure were studied.

During the ascent, when the acceleration was many times that of gravity, the animal was in a position such that acceleration acted in the direction from chest to back. There came a point during the increase of acceleration when the animal ceased to move noticeably. Its heart contraction soon after launching had trebled and its breathing became fast and shallow. On entry into orbit weight-

lessness ensued and the frequency of heartbeat and breathing gradually returned to normal. Blood circulation also became normal. The dog remained alive for some days, apparently in good health and the pressure in the life-compartment did not fall, showing that not only were the chemical methods for maintaining a suitable atmosphere adequate but that the compartment did not leak.

We are not told how the dog died. It may be that its last supply of food contained poison or that a timing mechanism broke a poison gas capsule after a certain number of days.

The effect of cosmic radiation on the animal is not known. When living creatures have spent some time in a satellite and can be returned safely to Earth we will learn what damage, if any, this radiation causes. In general, however, it can be said that apart from the as yet unknown radiation hazard, an animal stands up well to the stresses arising from space-flight. The results confirm and extend the data obtained from vertical rocket ascents of dogs and other animals.

These then are the first fruits of knowledge from the satellites. They show that vertical rocket shots give no more than a small fraction of the data obtained from satellites and that we can look forward to a vast increase of knowledge in many scientific fields when the first manned satellite is in position. To take one example only, astronomy, which up till now has developed as best it could impeded by the distortions of the Earth's atmosphere, will at last live up to the famous saying of St. Paul, "For now we see through a glass, darkly; but then face to face!"

From then on Man, the highest manifestation of life on this planet, will voyage, in body as well as in mind, into the realms of cosmic space.



New Hard-Cover Science Fiction Reviewed by

KENNETH F. SLATER

Nearly twenty years ago *THE SWORD IN THE STONE* was published, and in the same year (1939) its sequel appeared, *THE WITCH IN THE WOOD*. In 1940 came *THE ILL-MADE NIGHT*, making a trilogy of fantasy yarns by T. H. White based on the Arthurian legend. Then Mr. White left his theme to hang (and his books to become among some of the most-sought-after titles for fantasy enthusiasts, despite several editions) and concerned himself with other things until now a fourth title has been added to complete the Arthurian saga. This is "The Candle in the Wind" and it fills pages 547 to 677 of *THE ONCE AND FUTURE KING* (Collins, 25/-, 677 pp.), a new book containing this new work and the three previous books in one binding. For the benefit of collectors who already have the trilogy I think it should be made clear straight away that two chapters have been added to the first part, the second part has been largely rewritten (and retitled "The Queen of Air and Darkness"), whilst the third part has had but slight revision. As the fourth and concluding book has been published nowhere else, it will be obvious that either you

stay as you are, or you get the new whole book—and if you get it now you may still be in time to secure a "first edition".

For those of you who have never read any of the first three books, let me say that in general the story follows the "popular" Malory myth of the life of King Arthur, but that Mr. White adds motivations, characters and characterisations, incidents and sub-plots, never dreamed of by most mythologists and historians! Merlyn, wizard and tutor extraordinary to Arthur, is an amiable old gentleman (usually) who can remember to-morrow for the next couple of thousand years, but is often absent-minded about the here-and-now and yesterday. Arthur, as a boy, is a boy in the "Tom Sawyer" tradition, with a somewhat Kiplingesque flavour added to his activity by the "special lessons" which Merlyn provides to form his character. As, for instance, when Arthur is placed into the body of an ant for some instruction in rabid nationalism. Incidentally, I find delight in the thought of ants who communicate thusly: "105978/UDC reporting from square five. There is an insane ant on square five. Over to you."

Those of you who know "Le

Morte D'Arthur" will appreciate the breadth of drama, the all-pervading sense of the struggle with Might and Right (Arthur is continually faced with the problem of deciding when the two are one, and when Might is not necessarily Justice), and the other deeper implications of this story which is, in the English tradition, perhaps our nearest approach to the "god-hero" myth. At the same time Mr. White has introduced considerable elements of the lighter side of life, making the epic that much more complete. As, for example, the hilarious adventure of Sir Grummore and Sir Palomides when they disguise themselves as the Questing Beast to divert poor King Pellinore from his woes . . . and meet up with the real Questing Beast, who promptly develops amorous intentions towards the fake creature!

You will appreciate that this book is not "science"-fiction, but it is in the very best fantasy tradition, and a work worthy of the attention of every science-fiction addict.

FORTY YEARS ON by Doreen Wallace (Collins, 13/6, 254 pp.) is one of those unfortunate books written to depict the near future which appear a little too late. This does not necessarily detract from the worth of the book, but is apt to disconcert the reader. In this particular case, the preamble to the story proper refers to petrol rationing in Britain following the Suez crisis which "came in, and came to stay." This contradiction of fact makes it difficult for the reader to "get into" the story—it is like an ill-fitting coat, a little tight in the armpit. However,

the reader is advised to ignore this and suffer the minor discomfort for the sake of the rest.

The scene of the opening chapters is the Isle of Ely, in the fen country, which lends itself admirably to isolation after the first H-bombs have severed communications, destroyed the fen drainage system, and literally made an *isle* of Ely. Being a fen dweller myself I cannot entirely agree with the geographical areas which are flooded, but I am willing to bow to the probable research of the author in this matter. In any case, who is to tell just what might happen given the causes of the flood?

The immediate reactions of the survivors in this cut-off area are depicted with an imagination which is gratifying. Only too frequently authors make their characters effect drastic revisions of their normal lives. Here, apart from enforced-by-circumstances changes (rationing of available commodities, the return to simpler methods of agriculture and production) the life of the country people continues with little difference. There are no enforced labour squads doing this and that, no idealists drawing up new laws and codes. The first major trouble is economical, arising naturally from the countryman's old habit—especially in times of trouble—of keeping his money in an old sock (or something) up the chimney or under the bed. In consequence there is no money coming into the banks to recirculate—you see, the old form of life has persisted there, also!

Later there are scenes with which one could quibble. Gambling, in money and tokens, is eradicated by the introduction of

food coupons useable only by the person to whom they are issued and at that time. Frankly, this is absurd—as any prison warden, serviceman or gambler would agree. Lacking some form of token with which to gamble, property or service becomes the stake. Gambling is inherent in mankind, and several thousand years of history reveal a goodly number of well-intentioned but totally ineffective measures to stop it.

The first half of the book covers the setting up of the Isle community, its trials and triumphs, its fulfilments and its failures, and then the narrator, Terry Cole, feeling he has filled his duty to the community and desiring to learn more of what has happened to the rest of Britain, sets out on a journey of exploration. This journey across Britain from east to west is a series of incidents and conversations with different groups of survivors, not active-adventure, and although interesting falls short of being attention-holding.

The book, if message it has, conveys the proposition that Britain is a far better place

as an agricultural community, scratching a bare living from the soil, than as a manufacturing, inventive land of teeming millions of "townies" who (according to the author) have little survival value, either physical or cultural. Just the same, I can't help feeling that the people in it are a pretty unambitious lot who could have done a lot better for themselves (than the author has let them) if a few wide-awake types had survived. For example, in the Isle at the early days of the disaster there are a lot of "unemployed" townsfolk who have to be supported in idleness. At the same time there is only one forge, no power, a couple of windmills and little else of productive value. There are quite a few "townies" employed as fitters and panel-beaters who could turn to a little smith's work if the need arose; a carpenter ("townie" or not) would be just as useful as a farm-hand. None of these stolid farming types could apparently envisage the use of a land yacht over the vast system of railtracks in the fen country—and this I find hard to believe, as I know many farmers who are ardent yachtsmen. If the author has failed in some respects in this book, I feel it is that she has credited her fellow men with too little ingenuity and ambition.

And so much for this month—except to repeat an old appeal of mine—if you notice a science-fiction book newly out we've not mentioned, please let us know. We may not review it, but publishers seem to disguise so many s-f books as something else these days that we are always thankful for the information.

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WALTER WILLIS writes for you—

If my calculations are correct, and I figure this is bound to happen sometime by the law of averages, this column should be making its appearance just about the time Nebula's first four-part serial is sweeping majestically towards its climax. In the circumstances, maybe I should try and tell you something about its author, Mr. H. Kenneth Bulmer. As a matter of fact the only reason I haven't done this before is that I know too much about him. No, relax, this isn't going to be a Sunday newspaper exposure of authors in the Nebula stable kicking over the traces, it's just that I know and like Ken Bulmer too well to be confident I can do him justice. When you don't know very intimately the people you're writing about you have no trouble with selection. All you do is pass on to the reader your impressions of them and you have done your best: he has a nice clear little picture of the subject, on thin cardboard, just like yours. But I have known Ken Bulmer very well for more than ten years. I have put him up in my house and he has put up with me in his, and we have spent holidays together in various rainswept bungalows along the Irish coast. So when I think of him I'm inclined to for-

get the respected professional author: I tend to remember a bleary-eyed figure leaning against the kitchen doorway saying something like, "The best thing about having a hardboiled cigarette for breakfast is that you have time to smoke an egg."

Ken Bulmer is about thirty-five, dark-haired, wears glasses and has what in other people might be called round shoulders but in his case is obviously a scholarly stoop. When I first met him he owned a vehicle which in deference to the feelings of the automobile industry I always referred to as a horseless carriage. The importance of this contraption to the history of science fiction was that one journey in it so harrowed the soul of a friend of mine that he wrote an account of it in a fan magazine, and this was the start of the writing career of another pillar of British science fiction, James White. Eventually, having fulfilled its destiny and understandably depressed by the gloomy prognostications of all Ken's friends, the engine of the vehicle did fall out. Leaving it smoking in the road, Ken married a vivacious brunette called Pamela who is still in good running order and now drives him. They live in an old house

with a red door in an endless road in South East London.

At the time I first met him, Ken had no thought of being a professional author, though I was publishing fiction by him in my fan magazine. The nearest either of us had got to professional publication at that time was a short story we collaborated on one Sunday morning in Regent's Park Zoo, about the crew of a spaceship who were wrecked on the night side of an unknown planet and were eaten one by one by various kinds of horrible monsters until dawn, when the lone survivor found they had landed inside a wall bearing the notice "Please Do Not Feed The Animals". This story was at one time to be published by a reckless professional editor in Australia, but the publishers got wind of it and promptly went into voluntary liquidation. Undismayed, and encouraged by Pamela, Ken fought on and is now one of the very few people able to make a living by whole-time science fiction writing.


As well as the scientific knowledge shown in his stories and as half of Kenneth Johns, Ken is a mine of information on all sorts of odd subjects, from sailing ships and aerodynamics to old weapons and fortifications. But I wouldn't like you to think he is just a dilettante, an academic theorist. He puts his knowledge to sound practical use, as you would realise if you saw the fantastic galleons and brigantines he makes for my children out of old Woodbine packets and iced lollie sticks. Or witnessed him flying his own design of a kite, half strangled in a cocoon

of a peculiar string we had got from the local general store, so bent on its own destruction we called it the Gaderene twine. Or defying the incoming tide inside a beautifully castellated and complex fort of sand. As Wilde said, simple pleasures are the last refuge of the complex, and Ken is one of those all too rare people who have the capacity to preserve in maturity the joyous enthusiasm of childhood. In this, perhaps, is the sense of wonder so many of us miss in current science fiction? If so, Ken Bulmer is the author who may supply it and, if he continues to show in his published work half the human understanding that endears him to his friends, he may one of these days be a very great writer.

Reviews

Satellite No. 7. Don Allen, 34a Cumberland St., Gateshead 8, Co. Durham. 1/-. The cover proclaims in huge black capitals, "They took this fan . . . they gave him a gun . . . injected . . . drilled . . . deported . . . His fannish spirit yet survived . . . to bring you the full shocking story . . . It's Raw . . . Stark . . . Brutal." From which you may gather that the engaging Don Allen has returned from his national service with his sense of humour unimpaired. This issue starts off with the first part of Don's account of his various travels and the fans he met in the course of them and the rest of the issue, while containing little about science fiction itself, is interesting if you would like to know more about science fiction fans, or indeed if you are interested in interesting people.

SCIENTIFILM PREVIEWS



News and Advance Film Reviews Direct from Hollywood's

FORREST J. ACKERMAN

NIGHT OF THE BLOOD BEAST is the first film scripted by 21-year-old Martin Varno, science fiction fan "risen from the ranks", whose Wellesian ambitions extend to acting, directing and producing as well. Son of popular actor Roland Varno, who has played with such stars at Dietrich and Garbo, young Varno now plays with whole star-clusters.

This review—a single time departure from the usual format of this department—might be called "The Biography of an Abortion". A lot of blood flowed under the bridge from the time producer Gene Corman called me up seeking a writer to do a hyper-fast script for an ultra-low budget, and the fatal night a few brief months later when Jerome Bixby and I sat on either side of squirming scriptwriter Varno at the preview of his first picture, holding his hands . . . to prevent him from slitting his throat. The guttural sounds in the theatre were not all emerging from the creature from Galaxy 27 on the screen. Despite the tranquillising effect of a shot of soma, Varno twitched like he'd

swallowed a Mexican jumping bean. He looked like he wanted to join the Shrinking Man in incredible smallness.

Upon stepping (correction: being carried) into the foyer at the finis, the first words of the author were: "I wish I had enough money to buy the picture and burn it!" The average layman from the audience, passing by and chancing to overhear this remark, might understandably have felt it defied easy analysis, but to me, seasoned campaigner of a thousand Interplanetary Diplomacy Congresses and used for years to associating with slans, Varno's meaning was crystal—even tendrilly—clear: to the acutely attuned intelligence of the sensitive superfannish encephalon there could not be the most miniscule umbra of dubiety that the scripter was (though this may come as a shock to some) *disappointed* in the result!

Ron Cobb had designed a magnificent blood-beast. It out-thinged the Thing. Unfortunately it was never used; a cast-off hair-suit from *I Was a Teenage Teddy-Bear* or something was apparently picked up at a \$29 rummage sale

ONE GUINEA PRIZE

To the reader whose Ballot Form (below) is first opened at the NEBULA publishing office.

All you have to do, both to win this attractive prize and to help your favourite author win the 1958 Author's Award, is to number the stories in this issue in the order of your preference on the Ballot Form below, or on a postcard if preferred and mail it immediately to NEBULA, 159 Crownpoint Road, Glasgow, S.E.

The Captain's Dog	
Bitter End	
Dark Talisman	
Undiscovered Country	
Wisdom of the Gods-Pt. 4	

Name and Address :

Mr. D. E. Beesley, of Belfast, wins the One Guinea Prize offered in Nebula No. 32. The final result of the poll on the stories in that issue was :

- | | |
|-----------------------------|-------|
| 1. WISDOM OF THE GODS—Pt. 1 | |
| By Kenneth Bulmer | 18.1% |
| 2. SENSE OF PROPORTION | |
| By E. C. Tubb | 15.0% |
| 3. THEY SHALL INHERIT | |
| By Brian W. Aldiss | 15.0% |
| 4. NO TIME AT ALL | |
| By Mark Patrick | 14.3% |
| 5. CARRIAGE PAID | |
| By William Aitken | 13.3% |
| 6. WORDS AND MUSIC | |
| By Bertram Chandler | 12.8% |
| 7. BIGHEAD | |
| By W. T. Webb | 11.5% |

The result of the poll on the stories in this issue will appear in Nebula No. 38.

and reconstituted with a beak and some dyed-green excelsior, so the alien looked like he was ailin' when it came close-up time.

For the records: I wasn't as appalled with the end product as my supercritical client was, who said, "Forry, I won't hold it against you: I know you can't write a good review of it." I have seen far worse scientifilms, and so have you. One thing I give this picture praise for: it goes out of its way to give the alien an even break. There are pleas for sanity like: "Why not give the creature an opportunity to convey to us why it's here?—It doesn't kill just for the blind pleasure of killing—If you were a creature in a strange place, and wanted to communicate with its inhabitants, but every time you tried, they moved against you, the only way to break through to them would be to take a hostage, wouldn't it? It's been acting in fear and self protection." And the Creature asks: "Does it make me evil because my body is not the same as yours? You fight great wars because your brother speaks a different language. You kill because somebody else's philosophy does not coincide with yours. Because I am different you must not interpret me as an embodiment of evil." This might be Ray Bradbury speaking the theme of his own, earlier, *IT CAME FROM OUTER SPACE*; I believe it was the elder Corman brother expressing a personal philosophy through the mouth-piece of Martin Varno; Varno plans to speak his own piece in *CALL ME BROTHER*.

1572, "Tycho's Star" appeared, being as bright as Venus, then gradually died away, becoming invisible after 16 months. Kepler himself discovered a nova in 1604 as bright as the planet Jupiter. It remained visible for almost two years.

The astronomical telescope, the camera and the spectroscope now form the main instruments used by astronomers to study novae.

When a star turns nova, its rise to maximum brightness is very rapid indeed, the time being as short as two days. For example Nova Aquilae, 1918, increased its output of energy by over 20,000 times in under four days. This output is not maintained for long. A decline, rapid at first, takes place with irregular fluctuations being superimposed on the main fall in brightness. The rate of fall decreases and perhaps a year later the brightness is less than a hundredth that attained during the outburst. Most novae follow this pattern; a few are unusual and tend to remain very bright for weeks or months.

The study of a nova's spectrum yields much information. It changes as rapidly as its brightness. The spectral lines, originating in the outer parts of the star, show large shifts towards the violet. Measurements of these displacements lead astronomers to believe that the stellar gases are rushing outwards at hundreds, if not thousands of miles a second. For Nova Lacertae, the velocity reached 2,000 miles a second.

In addition to this Doppler shift, bright bands appear, characteristic of hot gases. Later, a spectrum similar to those given by gaseous nebulae appears, to disappear some years later.

All this gives a picture of a star expanding explosively due to some deep-seated over-production of energy and throwing off one or more shells of hot gas. Some six months after the initial observation of Nova Aquilae, a shell in fact was seen in large telescopes, expanding year after year. Other novae have been found to develop these expanding nebulous envelopes and it has been suggested by some astronomers that the mysterious planetary nebulae, those hot, white stars surrounded by a shell of gas, are the remains of novae, or more probably, supernovae explosions.

For in addition to novae, a second, rarer class of explosive star exists—the supernova, which at its brightest shines with the light of a whole galaxy, that is, with the light of ten million Suns or more.

The Crab Nebula in Taurus, shown here, may be the wreckage of such an explosion where half the mass of a star is dispersed into space. Work by Lampland, Duncan and others has shown that the expanding gases in the Crab had a central origin about 900 years ago. Chinese observers in 1054 A.D. noted a new star in that part of the sky.

The rapid development in the past thirty years of our knowledge of the interiors of stars has provided some glimpses of the possible cause of nova and supernova outbursts. The rate of output of stellar energy is rigidly controlled by central pressures and temperatures in a feedback system that adjusts the stellar interior so as to keep it in equilibrium. But any sudden increase in pressure that produces a sharp rise in temperature might initiate catastrophic chain reactions sufficiently energetic to disrupt the star. The outer layers of a large star are supported not only by the pressure of the deeper layers but also to a large extent by the mechanical pressure of the outpouring radiation. If a star's radiation pressure is suddenly reduced, perhaps because its nuclear fuel supply is exhausted, the outer layers, deprived of support, will collapse. Some astronomers believe this collapse may be sudden, giving the high central pressures and temperatures that make the star go nova or supernova.

It's comforting to remember that astrophysicists believe the Sun has some 10,000,000,000 years of steady life ahead of it before it exhausts its fuel supply for, if it did turn nova, eight minutes later the Earth would cease to exist.

